

SURGICAL C-ARM TABLES

SERVICE MANUAL

058-800
058-805
058-810
058-815



058-800 and 058-805



058-810 and 058-815

BIODEX

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SURGICAL C-ARM TABLES



058-800 and 058-805



058-810 and 028-815

This manual covers installation and operation procedures for the following products:

- | | |
|----------|------------------------------------|
| #058-800 | Table, Urology C-Arm 115 VAC |
| #058-805 | Table, Urology C-Arm 230 VAC |
| #058-810 | Table, Brachytherapy C-Arm 115 VAC |
| #058-815 | Table, Brachytherapy C-Arm 230 VAC |



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1. CONTROL MODULE REPLACEMENT

Tools Required:
Phillips screwdriver

The control module is located on the lower back panel.

1. To access the control module, remove the four larger Phillips screws securing the lower portion of the bellows to the clamshell covers. Each side has two screws located near the center of the clamshell.
2. The bellows is still secured to the top of the clamshell covers, but now it can be lifted and secured with bungee cords (see Figure 1.1). The table must be raised to its highest position to allow clearance to access and remove the controller.

NOTE: If the table cannot be raised to the up position the covers must be removed. First remove the remaining 12 Phillips screws securing the lower portion of the bellows to the covers. Next, separate the covers by removing the four securing screws located at each end, and then slide the covers out.

3. Remove the six screws that secure the lower back panel (see Figure 1.2). Remove the lower back panel. Slide the control module out carefully. Make sure that the connecting cables are not being damaged as you slide the box out.
4. Disconnect all cables (see Figure 1.3).
5. Remove the six nuts that secure the module to the back panel.

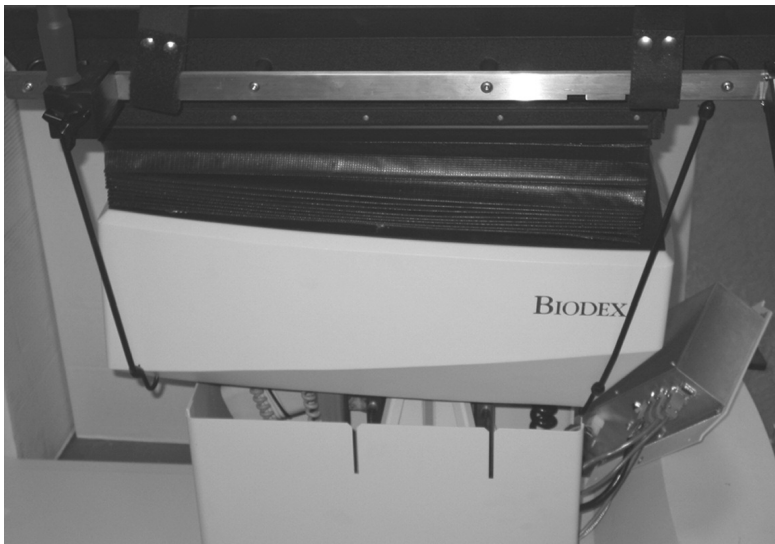


Figure 1.1.

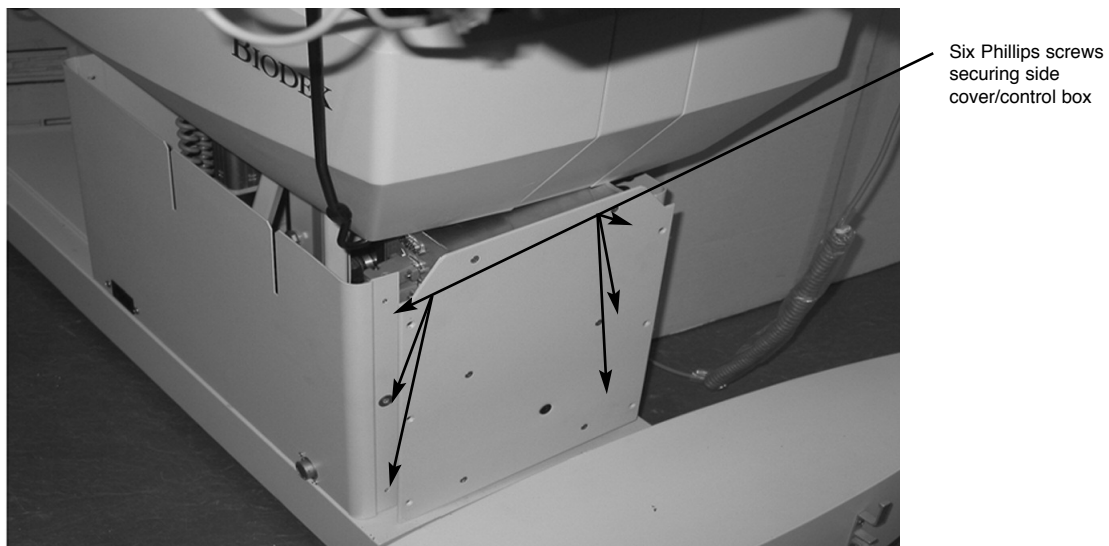


Figure 1.2.

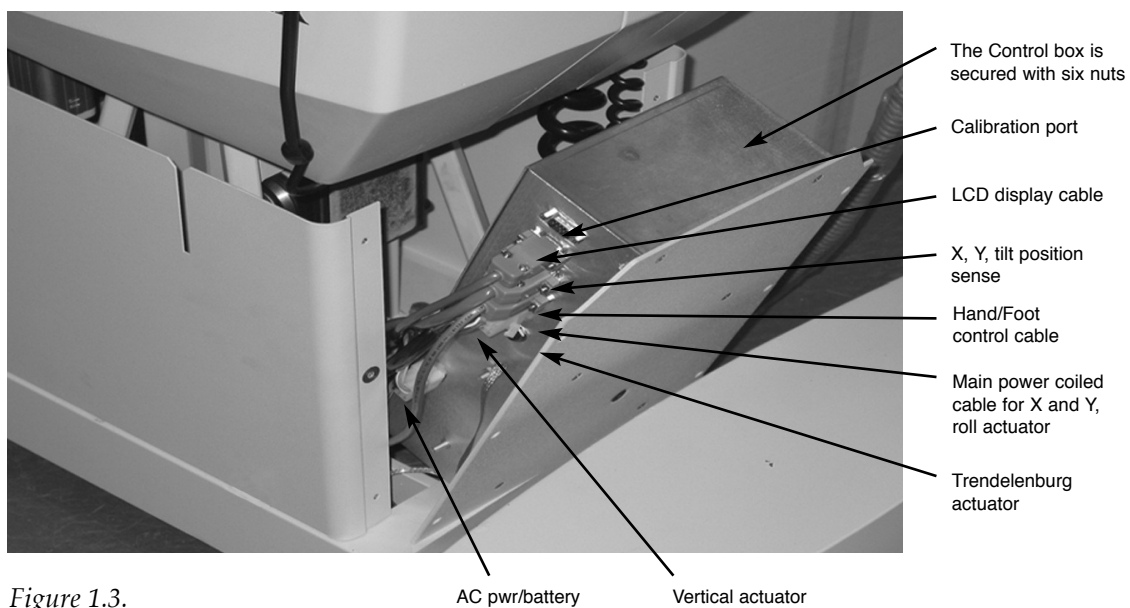


Figure 1.3.

2. X MOVEMENT ACTUATOR REPLACEMENT, (HEAD-TO-TOE)

Tools Required:

Allen keys

Wire cutters

Socket set, standard

Phillips screwdriver

REMOVAL

1. Make sure the table is level before you remove the actuator assembly. The table may abruptly move when the actuator is disconnected.
2. Remove the tabletop, which is secured with eight bolts (see Chapter 9, Tabletop Replacement).
3. Remove the tie wrap that holds the excess power cable of the actuator to the bed frame, and disconnect the actuator connector.
4. Remove the 7/16 bolts that secure the worm gear collar bracket to the frame.
5. Remove the two Allen screws holding the actuator-mounting clevis bracket to the frame.
6. Remove the clevis bracket from the actuator.
7. Cut the tie wraps holding the sound insulation on the actuator and carefully remove the insulation. The insulation will be re-used on the new motor.

INSTALLATION

Note: A calibration is needed for this actuator.

1. Install the clevis bracket on the new actuator.
2. Install the existing insulation on to the new actuator using tie wraps.
3. Install the motor and clevis bracket back on the frame.

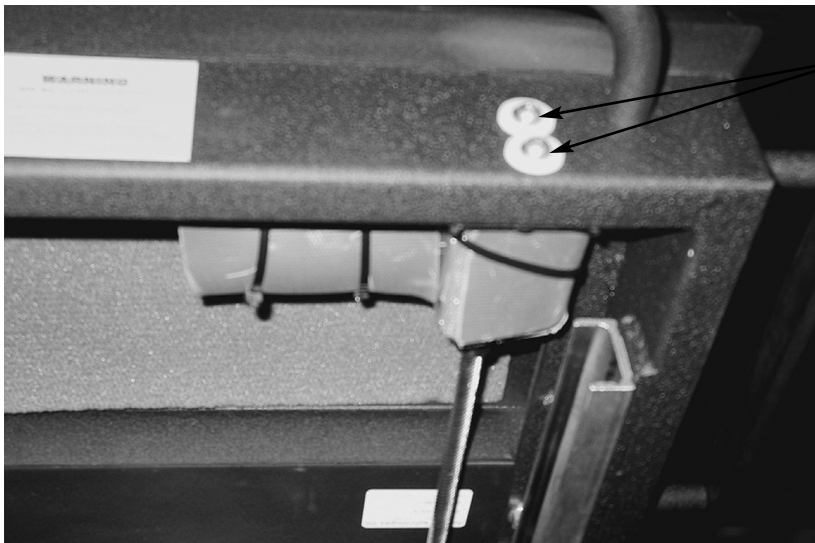
NOTE: The frame is slotted, so install bracket as close to the bottom as possible. This will insure the end of the worm gear does not hit the table when it is turning.

4. Plug the actuator connector in and run the collar about 3/4 of the way up the worm gear.
5. Install the collar bracket with two 7/16 bolts into weldment. Keep the flat side of the collar facing up when installing the collar.
6. Calibrate the table as instructed in Chapter 13, Calibration Procedure.



Worm gear
collar & bracket

Figure 2.1. The X actuator worm gear collar and bracket. To access the bolts the top must be removed. This view is from underneath.



Actuator clevis
mounting screws
5/32 Allen

Figure 2.2. Actuator clevis mounting screws.

3. Y MOVEMENT ACTUATOR REPLACEMENT, (LATERAL)

Tools Required:

Phillips screwdriver

Allen keys

Socket set, standard

Wire cutters

REMOVAL

1. Activate the X motor and move the tabletop all the way towards the back.
2. Remove the four 9/16th bolts, which are now accessible from the underside of the tabletop (see Figure 3.1).
3. Activate X motor and move the tabletop all the way forward.
4. Support the tabletop, before removing the final four 9/16th bolts, which are accessible from the forward underside of table.
5. Remove the four remaining bolts and lift to remove the tabletop. Once the tabletop is removed you will have access to the X actuator as shown in Figure 3.1.
6. Remove the two Phillip screws holding the resistor strip wiper bracket (see Figure 3.2).
7. Remove the four hex head bolts located in the side of the Y-motor nut mounting bracket.

NOTE: Do not remove the Allen screws holding the rollers.

8. Remove the two 3/16 Allen bolts holding the actuator collar to the Y-motor nut-mounting bracket (see Figure 3.3).
9. Remove the C-clip and pin holding the actuator to the clevis bracket.
10. Disconnect the power connector and remove the actuator.

INSTALLATION

NOTE: The actuator needs to be calibrated after installation.

1. Install the new actuator to the clevis bracket.
2. Install the actuator collar to the Y-motor nut mounting bracket with the flat side of the collar facing away from the bracket.
3. Install the Y-motor nut mounting bracket to the frame using the four hex bolts. Refer to assembly drawing, Surgical C-Arm, for reference.
4. The collar on the worm gear should now be facing down towards the base weldment. Run the actuator through its min and max range to make sure it moves without restriction and runs quietly.
5. Install tabletop.
6. Calibrate table as instructed in Chapter 11, Calibration Procedure.



Figure 3.1.

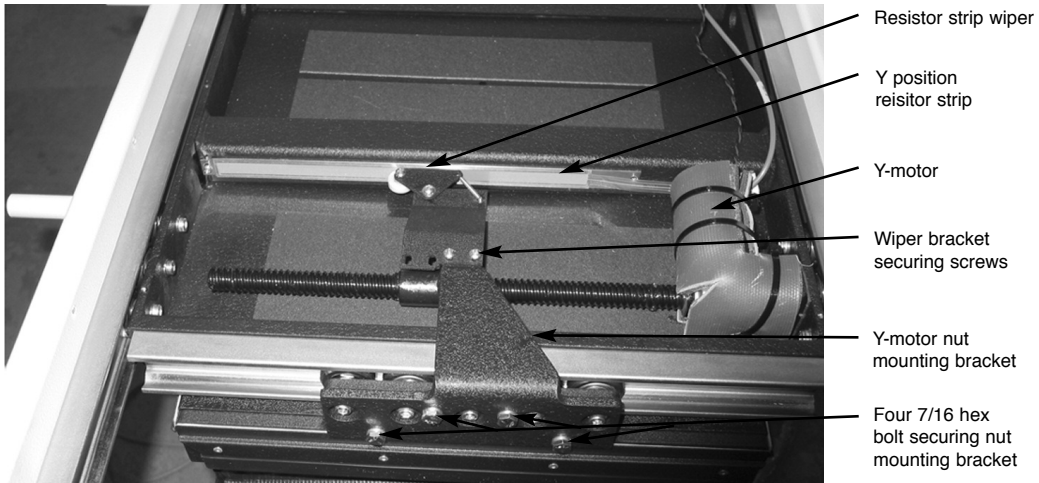


Figure 3.2.

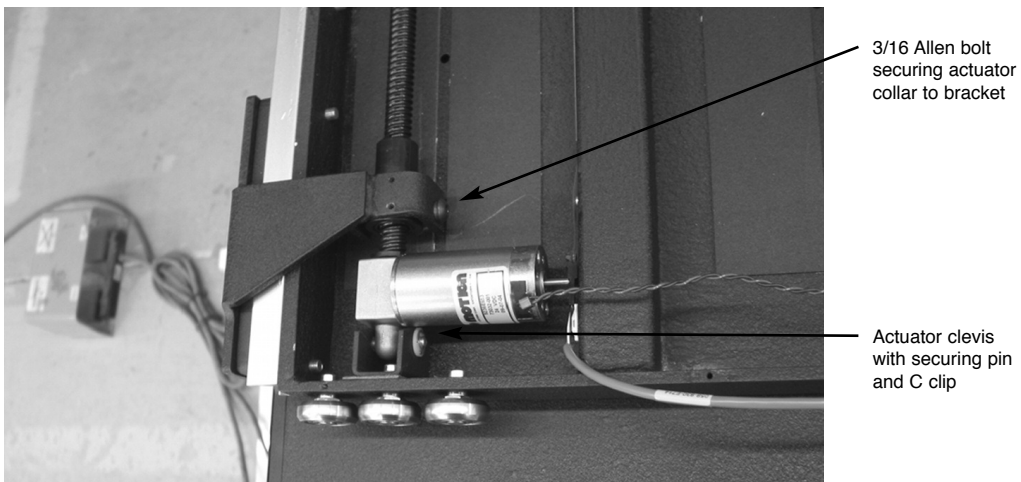


Figure 3.3.

4. LIFT ACTUATOR REPLACEMENT

Tools Required:
Phillips screwdriver
5 mm Allen key
8 mm wrench

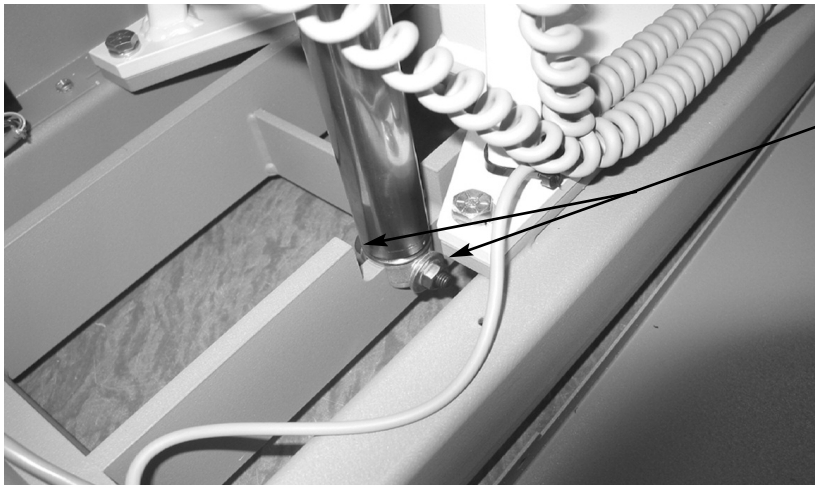
PROCEDURE

1. If the lift actuator is operational, the table should be brought down to its lowest position. If the actuator is not operational, the tabletop must be supported to prevent it from falling once the actuator is removed.
2. Lower the table top to its lowest position and remove the 18 Phillips screws that secure the lower portion of the bellows.
3. Remove the eight Phillips screws securing the top covers, and remove one cover at a time.
4. Remove the lower right cover secured with nine Phillips screws.
5. Remove the lower back panel (see Chapter 1, Control Module Replacement). Only three panels now remain on the right side since you should have already removed the lower left panel.

NOTE: Be sure to support the table top on both ends to prevent it from dropping once the lift actuator is removed.

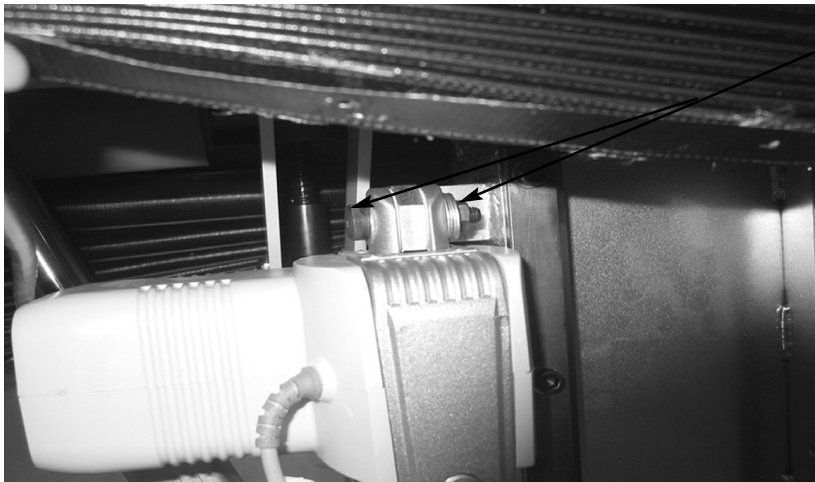
6. The actuator is secured at both ends with a five-mm Allen head shoulder bolt and an eight-mm nut. (Figure 4.1 shows the lift actuator bottom-securing bolt. Figure 4.2 shows the lift actuator upper securing bolt.)
7. Remove the actuator and unplug the actuator power cable at the RCA jack on the controller box. (Figure 4.3 shows the control box and vertical lift actuator RCA plug location. Also, refer to the parts section drawing labeled I-Base Assy. for assembly components and part numbers.)

NOTE: For reinstallation of the actuator, reverse the process and test for proper operation before installing the enclosures.



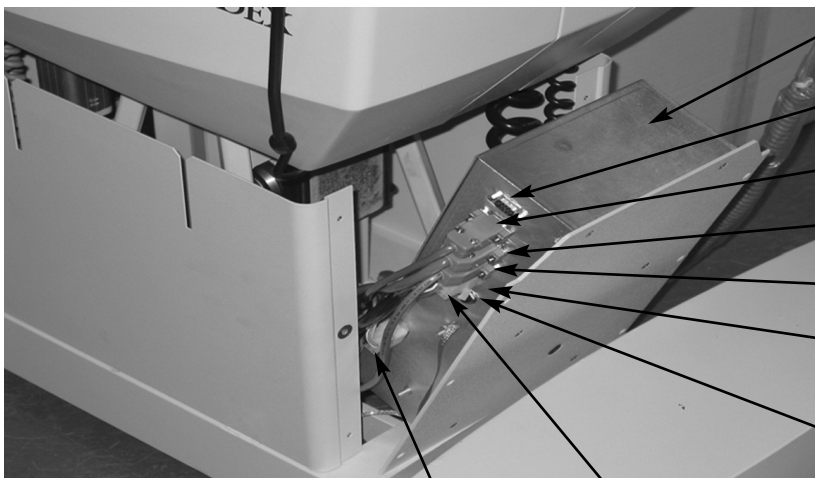
Lift actuator lower bolt and nut

Figure 4.1



Lift actuator upper bolt and nut

Figure 4.2.



Control box is secured with six nuts
Calibration port
LCD display cable
X, Y, tilt position sense
Hand/Foot control cable
Main power coiled cable for X and Y, roll actuator
Trendelenburg actuator

Figure 4.3.

AC pwr/battery

Vertical actuator

5. LATERAL TILT ACTUATOR REPLACEMENT

Tools Required:
Phillips screwdriver
3/16" Allen key
1/2" wrench

PROCEDURE

1. If the lateral tilt actuator is operational, tilt it down on the patient right side. The table should be brought head down to its lowest position. If the actuator is not operational, the tabletop must be supported to prevent the table top from suddenly tilting once the actuator is removed.
2. The actuator is located inside the bellow on the patient right side. Remove the 18 Phillips screws that secure the lower portion of the bellows.
3. Remove the eight Phillips screws that secure the top covers, and then remove the covers one at a time.
4. Remove the lower right cover that is secured with nine Phillips screws.
5. Remove the lower back panel. (Six screws secure the lower back panel, but only three remain on the right side since you should have already removed the lower left panel.)

NOTE: Be sure to support the tabletop to prevent it from dropping once the lateral tilt actuator is removed.

6. The actuator is secured to the table with a 3/16-inch Allen head shoulder bolt and 1/2-inch nut. (Figure 5.1 shows the securing bolt assembly). In addition, the acme nut is secured with two 3/16-inch bolts. (Figure 5.2 shows the acme nut assembly.)
7. Remove the actuator and unplug the actuator power cable at connector #3 on the controller box. (Figure 5.3 shows the control box and actuator plug location #3. Also refer to the parts section drawing, labeled Base Top Assembly for assembly components and part numbers.)

NOTE: For reinstallation of the actuator, reverse the process and test for proper operation before installing the enclosures.

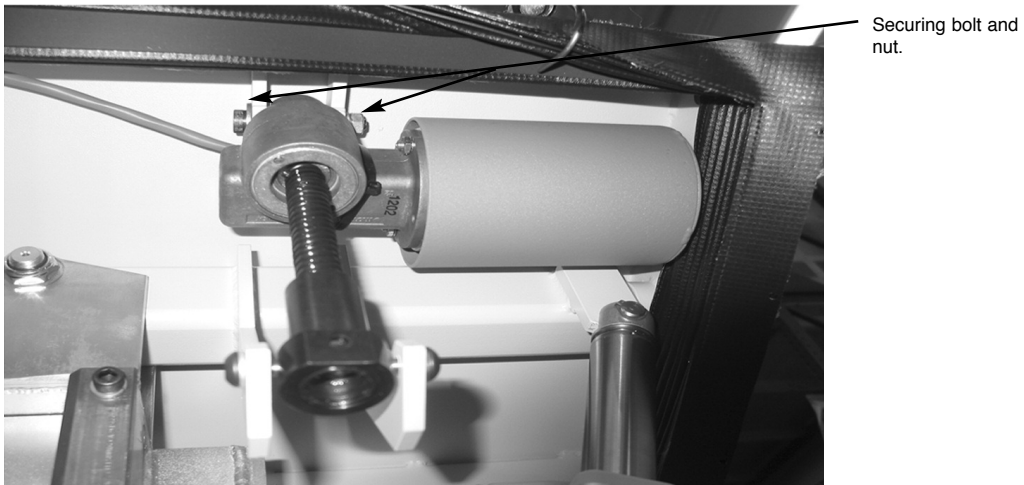


Figure 5.1.



Figure 5.2.

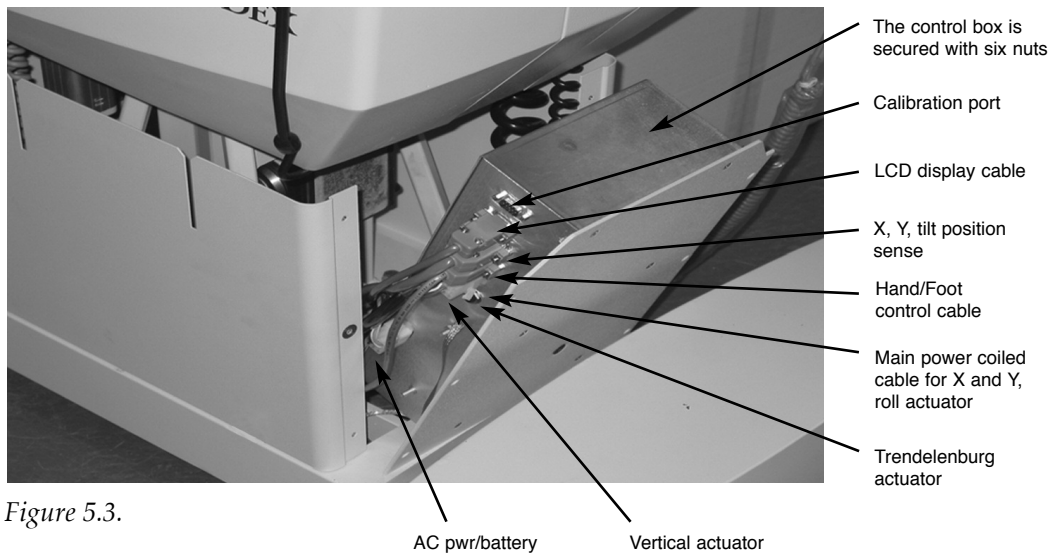


Figure 5.3.

6. HEAD-TO-TOE TILT ACTUATOR REPLACEMENT

Tools Required:
Phillips screwdriver

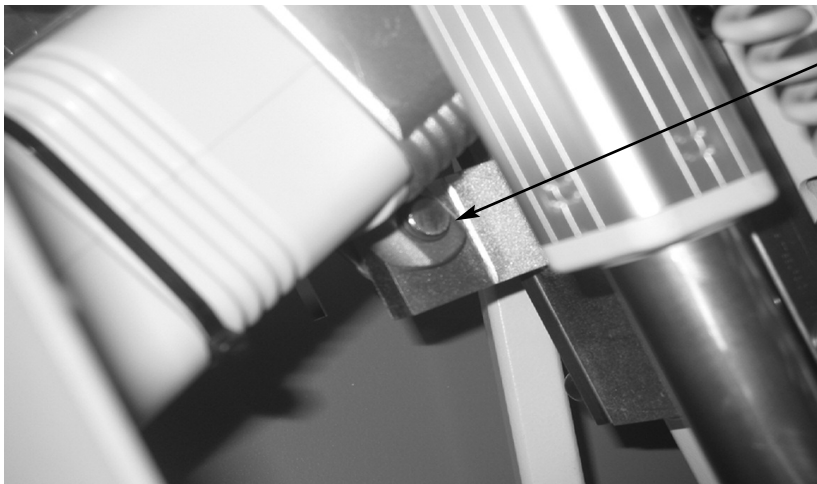
PROCEDURE

1. If the tilt actuator is operational, the table should be brought head down to its lowest position. If the actuator is not operational, the tabletop must be supported to prevent the top from suddenly tilting once the actuator is removed.
2. Tilt the top head down to its lowest position, and remove the eighteen Phillips screws that secure the lower portion of the bellows.
3. Remove the eight Phillips screws securing the top covers, and then remove the covers one at a time.
4. Remove the lower right cover secured with nine Phillips screws.
5. Remove the lower back panel. (Six screws secure the lower back cover, but only three remain on the right side since you should have already removed the lower left panel.)

NOTE: Support the tabletop to prevent it from dropping once the tilt actuator is removed.

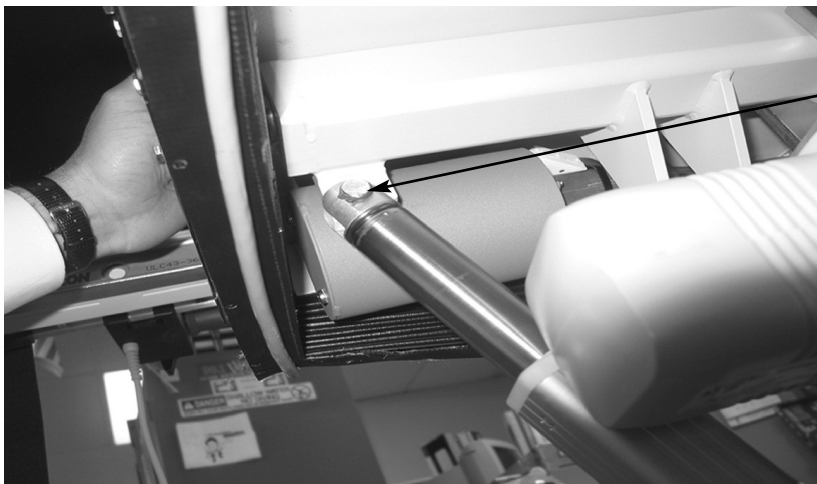
6. The actuator is secured at both ends with a pin and C-clip. Remove the clip and pull the pins out. (Figure 6.1 shows the lift actuator bottom-securing bolt. Figure 6.2 shows the lift actuator upper securing bolt. Refer to the illustrated parts section with the page entitled I – Base Assy , see item #51.)
7. Remove the actuator and unplug the actuator power cable at the RCA connector on the controller box. Figure 6.3 shows the control box and actuator plug location.

NOTE: To reinstall the actuator, reverse the process and test for proper operation before installing the enclosures.



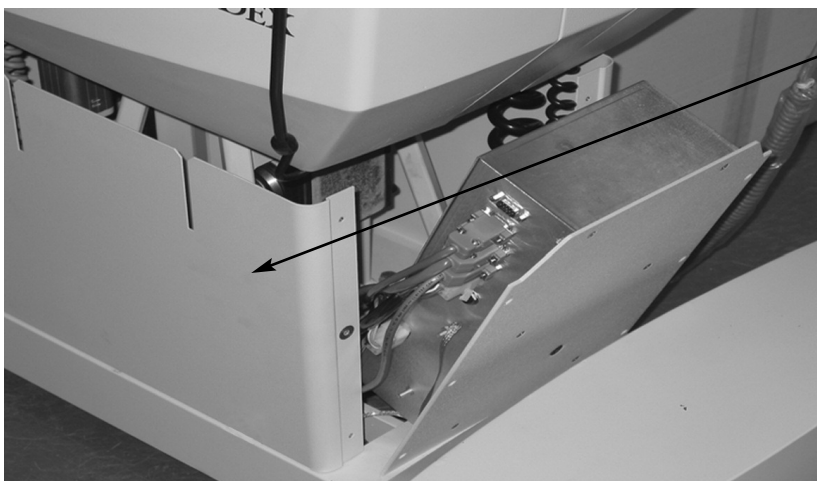
Actuator lower
securing pin
and clip

Figure 6.1.



Actuator upper
securing pin
and clip

Figure 6.2.



Trendelenburg
actuator

Figure 6.3.

7. TABLETOP REPLACEMENT

Tools Required:
9/16" wrench

PROCEDURE

1. Activate the X motor and move the tabletop all the way towards the back.
2. Remove the four 9/16-inch bolts, which are now accessible from the underside of the tabletop (see Figure 7.1).
3. Activate the X motor and move the tabletop all the way forward.
4. Support the tabletop before removing the final four 9/16-inch bolts that are accessible from the forward underside of table.
5. Remove the four remaining bolts and lift to remove the tabletop.



Figure 7.1.

8. CONTROLLER BOX REPLACEABLE COMPONENT

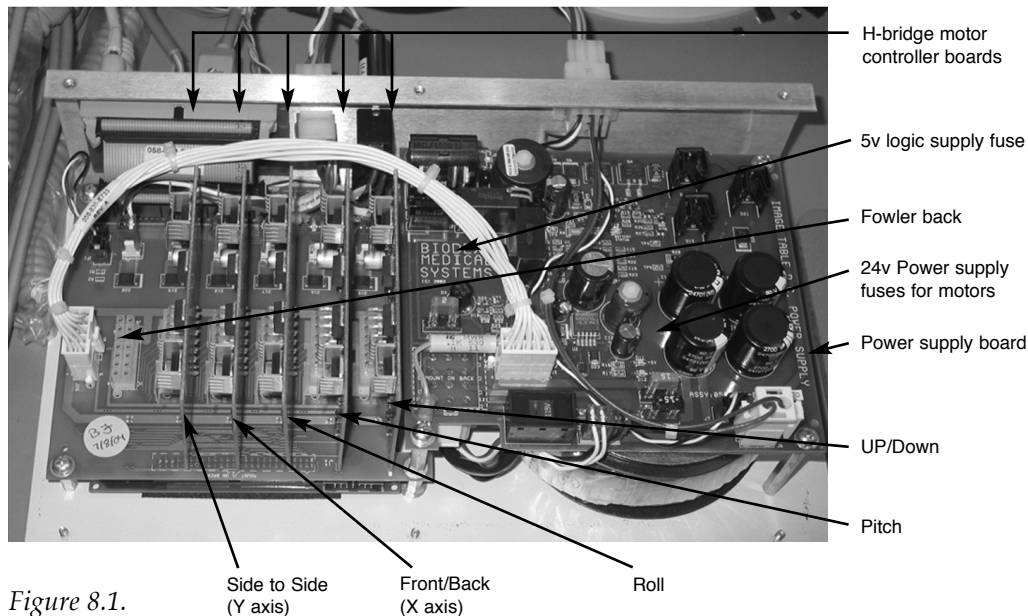


Figure 8.1.

Tools Required:
Phillips screwdriver

PROCEDURE

Figure 8.1 shows the control board layout. There are six board slots, which are labeled to designate their function. Each board activates a specific actuator or solenoid. The control board is configured to the table type it is used in. The control box is configured for a 058-830 table - that is why the last slot J8 (Fowler Back) is not used.

Slot Designations	Function
J3	Up/Down
J4	Pitch (head to toe tilt)
J5	Roll (side to side tilt)
J6	Front to Back (x axis)
J7	Side to Side (y axis)
J8	Fowler back

Replaceable Components

- Fuses are located on the power supply board as identified above. The motor fuses (2) are 15-amp and the display/logic is 2-amp. To replace, simply pull straight out from the socket.
- To replace the H-bridge motor controller board, pull straight up. To easily identify if board is defective replace with board from a known operating motor. When installing boards, line up pins on board with connector and press down evenly.
- To replace the Power Supply board, remove the four Phillips screws located at each corner. Next, disconnect the three connectors, J3, J5 & J6.

The above component replacement does not require that the table be recalibrated; however verification of proper operation is required.

9. TILT SENSOR BOARD REMOVAL AND REPLACEMENT

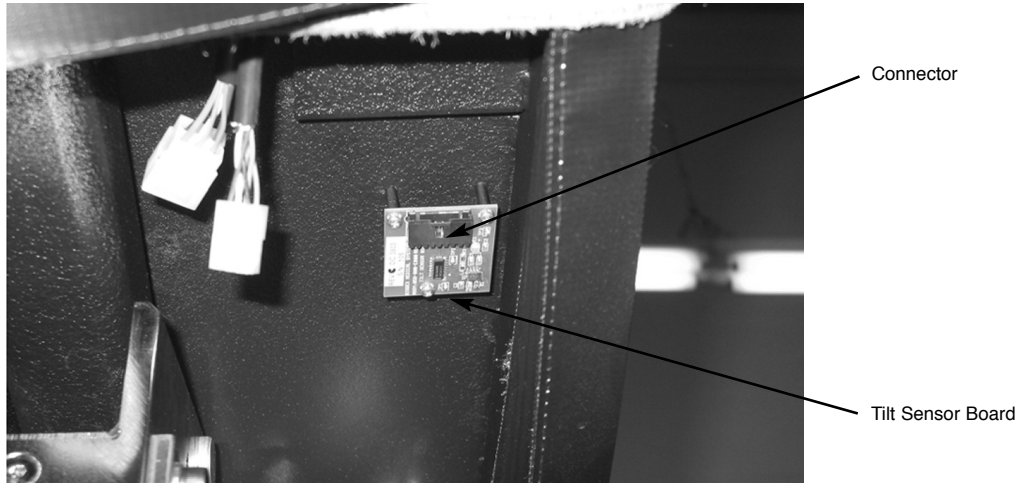


Figure 9.1.

Tools Required:
Phillips screwdriver

PROCEDURE

The tilt sensor is under the table top, on the patient left side next to lateral tilt actuator.

1. Raise table to maximum height, for better accessibility.
2. Remove the eighteen Phillips screw securing the lower portion of the bellow.
3. Lift the bellows and secure in the up position. This provides you with access to the sensor.
4. Disconnect the signal cable connector.
5. Remove the three Phillips screws securing the sensor board.
6. To reinstall the Tilt Sensor board, reverse the procedure above. For a detailed illustration refer to Chapter 16, Part and Assembly Illustrations.

NOTE: The table must be recalibrated when a new sensor is installed. Refer to Chapter 11, Calibration Procedure for instructions.

10. POSITION SENSING STRIP REPLACEMENT

Tools Required:
Phillips screwdriver

PROCEDURE

The table utilizes three precision resistor strips to sense the table's height and X, Y tabletop position. Figure 10-1 shows the resistor strip installed on the table. The wiper/roller move along the resistor strip as the position of the table changes. The resistance change is in direct correlation to the wiper position. Any changes in resistance are converted to position counts, which are shown on the display.

NOTE: Refer to Chapter 4, Lift Actuator Replacement, steps one through four, to access the position strip for replacement. Refer to Chapter 7, Tabletop Replacement, to access X and Y position strip for replacement.



Figure 10.1. Height position sensing resistor strip.

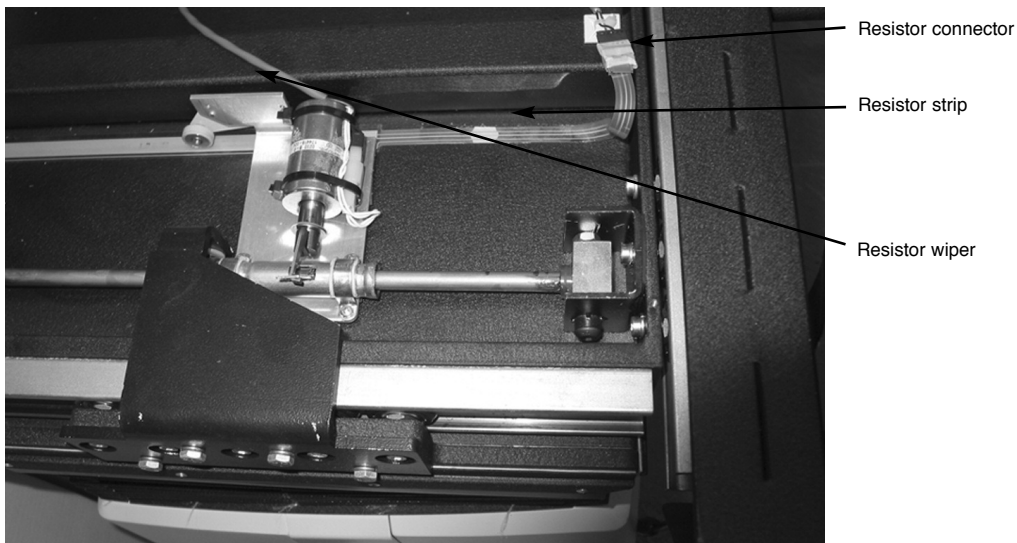


Figure 10.2. Y position sensing resistor strip (solenoid assembly, tabletop removed.)

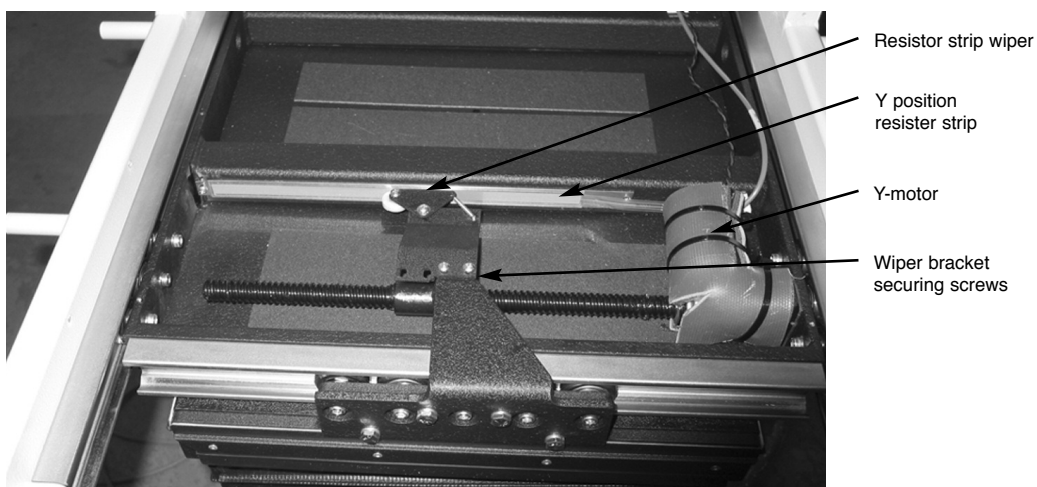


Figure 10.3. Y position sensing resistor strip (actuator assembly, tabletop removed)

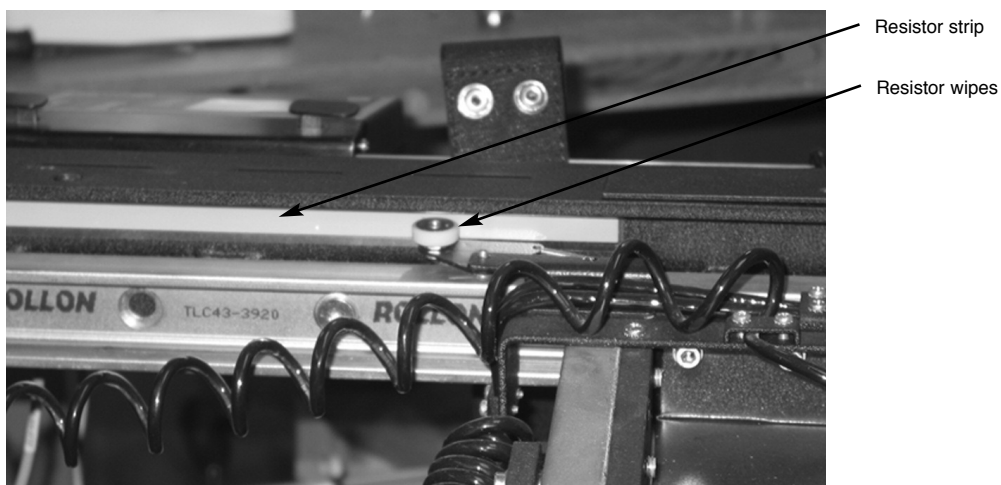


Figure 10.4. X position sensing resistor strip (tabletop removed for viewing)

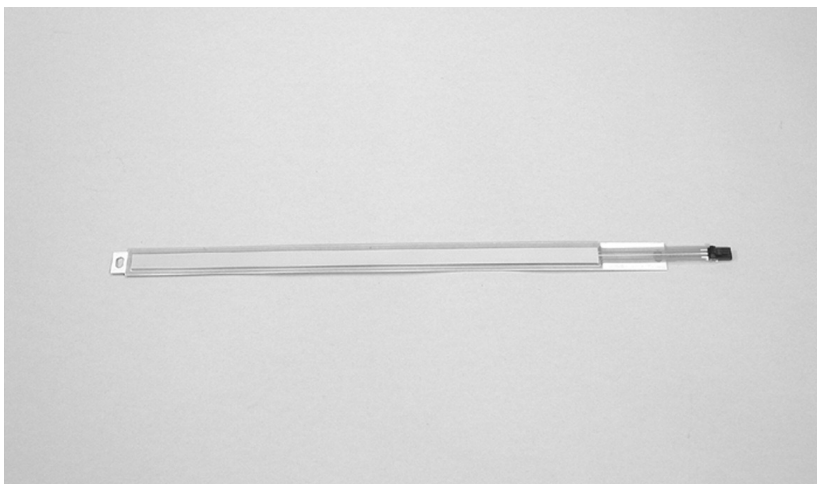


Figure 10.5. Resistor strip not installed. Note that the strip is secured with adhesive to a thin metal mounting plate. The mounting plate is attached to the designated location with two Phillips screws at each end.

REPLACING THE RESISTOR STRIP

To replace the resistor strip, remove the two securing screws. Next, lift wiper/roller and remove the strip (strip may also be secured with adhesive). When any sensor is replaced a table calibration is required. Refer to Chapter 11, Calibration Procedure, for instructions.

11. TABLE CALIBRATION PROCEDURE

Tools Required:

PC with latest table calibration software installed

PROCEDURE

1. Connect COMM PORT 1 of the PC to the 9 pin male "D" connector of the table's control box, using a 9 pin female to 9 pin female RS-232 cable.
2. Turn the computer and monitor on.
3. When Windows is finished booting, double-click the left mouse button on the Image Table icon on the PC's desktop, to start the utility software.
4. Enter the table serial number in the appropriate box in the utility software.
5. Turn the table ON. "Welcome", "Press C to Calibrate" and other information or characters may be displayed in the software's receive window.
6. Click the left mouse button on "CALIBRATE." "++++ IMAGE TABLE CALIBRATION +++++" will be displayed in the software's receive window.
7. Follow the on-screen prompts in the utility's receive window.
8. The current selection for the type of table is displayed. This can be changed by pressing "Y" on the keyboard.
9. The table type choices are: 1) 830/870/C-ARM, 2) 840 Float Top, 3) Lithotripsy, 4) 800/810 URO/BRACH. Select the correct table type by pressing number 1-4 on the keyboard.
10. The current selection for the type of motor installed is displayed. The motor type choice is either High Speed or Low Speed. If this is incorrect, the motor type can be changed by pressing "Y" on the keyboard, otherwise press "N".
11. You will be given the option to calibrate each of the following:
UP/DOWN
FORWARD/BACK
SIDE TO SIDE
JOYSTICK
PITCH Axis
ROLL Axis
12. Select "Y" for each and follow the on-screen prompts.
13. To Calibrate UP/DOWN:
 - a. Press the appropriate UP or DOWN hand switch button so that "+ +" is displayed in the utility's receive window.
 - b. When the MAX Position is reached, reverse direction momentarily to back away from the MAX Position slightly, then press any key to set position.
 - c. Press the appropriate UP or DOWN hand switch button so that "- -" is displayed in the utility's receive window.
 - d. When the MAX Position is reached, reverse direction momentarily to back away from the MAX Position slightly, then press any key to set position.

-
-
14. Calibrate FORWARD/BACK:
 - a. Press the appropriate FORWARD or BACK hand switch button so that "+ +" is displayed in the utility's receive window.
 - b. When the MAX Position is reached, reverse direction momentarily to back away from the MAX Position slightly, then press any key to set position.
 - c. Press the appropriate FORWARD or BACK hand switch button so that "- -" is displayed in the utility's receive window.
 - d. When the MAX Position is reached, reverse direction momentarily to back away from the MAX Position slightly, then press any key to set position.
 15. Calibrate SIDE TO SIDE:
 - a. Press the appropriate LEFT or RIGHT hand switch button so that "+ +" is displayed in the utility's receive window.
 - b. When the MAX Position is reached, reverse direction momentarily to back away from the MAX Position slightly, then press any key to set position.
 - c. Press the appropriate LEFT or RIGHT hand switch button so that "- -" is displayed in the utility's receive window.
 - d. When the MAX Position is reached, reverse direction momentarily to back away from the MAX Position slightly, then press any key to set position.
 16. Calibrate JOYSTICK:
 - a. Leave Joystick Centered, then press any key.
 - b. Hold down Joystick button and move Joystick in circles several times, then press any key.
 17. Calibrate PITCH Axis:
 - a. Press the appropriate PITCH hand switch button so that "+ +" is displayed in the utility's receive window.
 - b. When the MAX Position is reached, reverse direction momentarily to back away from the MAX Position slightly, then press any key to set position.
 - c. Press the appropriate PITCH hand switch button so that "- -" is displayed in the utility's receive window.
 - d. When the MAX Position is reached, reverse direction momentarily to back away from the MAX Position slightly, then press any key to set position.
 18. Calibrate ROLL Axis:
 - a. Press the appropriate ROLL hand switch button so that "+ +" is displayed in the utility's receive window.
 - b. Press any key when 18 DEGREES TILT is reached.
 - c. Press the appropriate ROLL hand switch button so that "- -" is displayed in the utility's receive window.
 - d. Press any key when 18 DEGREES TILT is reached.
 19. You will be asked if you need to change the HOME Position. Move the table to the NEW HOME Position, then press any key.

NOTE: The table must have the HOME position set to Full Down, Full Back, and Left/Right Centered.
 20. When "***** EXIT Calibration MODE *****" is displayed you can choose to discard the previous calibration by pressing "C" to recalibrate, or save the calibration by pressing "S," or load a saved calibration by pressing "L".

-
-
21. When you are satisfied with the calibration, press "S" to save the calibration. Various numbers and letters will scroll by in the software's receive window.
 22. The Imaging Table Calibration Utility may be exited by clicking File --> Exit on the menu bar or by clicking the X in the upper right corner.

12. OPERATION/CALIBRATION VERIFICATION

PROCEDURE

AC Powered

MAIN LCD CONTROL

1. Verify scaling on all axes.
 - a. Pitch -1 to -20, 0, 1 to 20
 - b. Roll R1-20, 0, L1-20
 - c. Vertical 0 - 10
 - d. X-axis 0 - 20
 - e. Y-axis R1-5, 0, L1-5
2. Verify that the commanded direction matches the actual direction for all axes.
3. Verify move to stored position, both direction and value.
4. Verify that the hold button is enable. Press and hold the soft button four for 15 seconds to enter hidden setup screen. Check for hold button enabled.
5. Verify level. Press the hold and level buttons simultaneously, and confirm that the table levels both horizontally and vertically and beeps indicating that the final position has been reached.
6. Verify home. Press the hold and home buttons simultaneously, and confirm that the table moves to home position and beeps indicating that the final position has been reached.
7. Verify that the main control operates in both ports.
8. Verify that the LCD screen Displays "AC" in lower left hand corner.
9. Verify scaling on all axes.
 - a. Pitch -1 to -20, 0, 1 to 20
 - b. Roll R1-20, 0, L1-20
 - c. Vertical 0 - 10
 - d. X-axis 0 - 20
 - e. Y-axis R1-5, 0, L1-5
10. Verify that the commanded direction matches the actual direction for all axes.
11. Verify that the hand pendent operates in both ports.

HAND PENDANT CONTROL

1. Verify scaling on all axes.
 - a. Pitch -1 to -20, 0, 1 to 20
 - b. Roll R1-20, 0, L1-20
 - c. Vertical 0 - 10
 - d. X-axis 0 - 20
 - e. Y-axis R1-5, 0, L1-5
2. Verify that the commanded direction matches the actual direction for all axes.
3. Verify that the hand pendant operates in both ports.

FOOTSWITCH CONTROL

1. Verify scaling on all axes.
 - a. Pitch -1 to -20, 0, 1 to 20
 - b. Roll R1-20, 0, L1-20
 - c. Vertical 0 - 10
 - d. X-axis 0 - 20
 - e. Y-axis R1-5, 0, L1-5
2. Verify that the commanded direction matches the actual direction for all axes.
3. Verify that the footswitch operates in both ports.

BATTERY Powered

MAIN LCD CONTROL

1. Verify scaling on all axes.
 - a. Pitch -1 to -20, 0, 1 to 20
 - b. Roll R1-20, 0, L1-20
 - c. Vertical 0 - 10
 - d. X-axis 0 - 20
 - e. Y-axis R1-5, 0, L1-5
2. Verify that the commanded direction matches actual direction for all axes.
3. Verify move to stored position, both direction and value.
4. Verify that the hold button is enable. Press and hold the soft button four for 15 seconds to enter hidden setup screen. Check for hold button enabled.
5. Verify level. Press the hold and level buttons simultaneously, and confirm that the table levels both horizontally and vertically and beeps indicating that the final position has been reached.
6. Verify home. Press the hold and home buttons simultaneously, and confirm that the table moves to home position and beeps indicating that the final position has been reached.
7. Verify that the main control operates in both ports.
8. Verify that the LCD screen Displays "BATT" in lower left hand corner.

HAND PENDANT CONTROL

1. Verify scaling on all axes.
 - a. Pitch -1 to -20, 0, 1 to 20
 - b. Roll R1-20, 0, L1-20
 - c. Vertical 0 - 10
 - d. X-axis 0 - 20
 - e. Y-axis R1-5, 0, L1-5
2. Verify that the commanded direction matches the actual direction for all axes.
3. Verify that the hand pendant operates in both ports.

FOOTSWITCH CONTROL

1. Verify scaling on all axes.
 - a. Pitch -1 to -20, 0, 1 to 20
 - b. Roll R1-20, 0, L1-20
 - c. Vertical 0 - 10
 - d. X-axis 0 - 20
 - e. Y-axis R1-5, 0, L1-5
2. Verify that the commanded direction matches the actual direction for all axes.
3. Verify that the footswitch operates in both ports.

13. DISPLAY LCD PENDANT REPLACEMENT

The LCD Pendant displays and stores position information and controls all the motor movements, up/down, Trendelenburg / rev, lateral roll, head to toe actuator (X) and side-to-side actuator (Y). The Release Handle releases the X and Y solenoids simultaneously, which allows the top to float.

REMOVAL OF DISPLAY

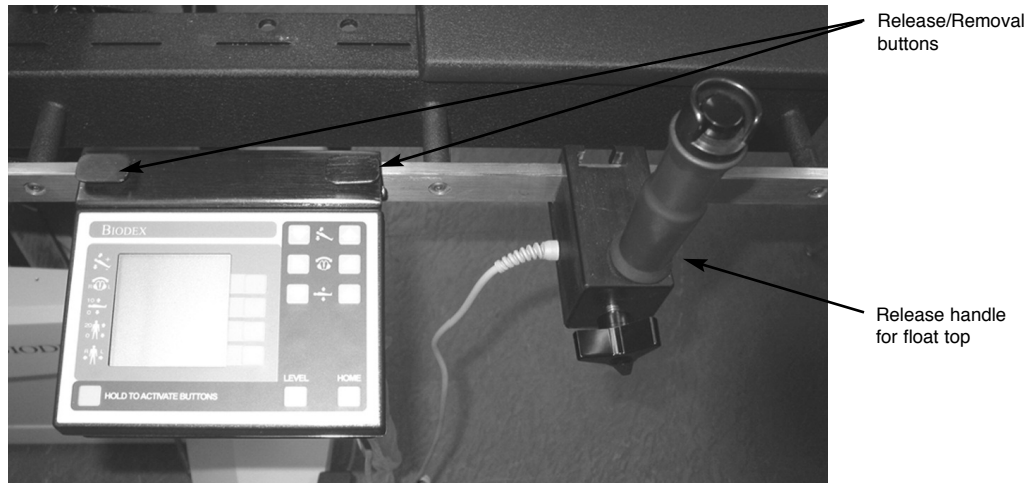


Figure 13.1.

1. To remove the display, lift the display up while depressing the release/removal buttons. Also the Display can be positioned anywhere along the rail by depressing the release buttons.
2. Disconnect the two connectors shown in Figure 13.1. The connectors are color-coded for the blue is main power/communication cable and white is for either the release handle (840) or joystick (830), based on table configuration.

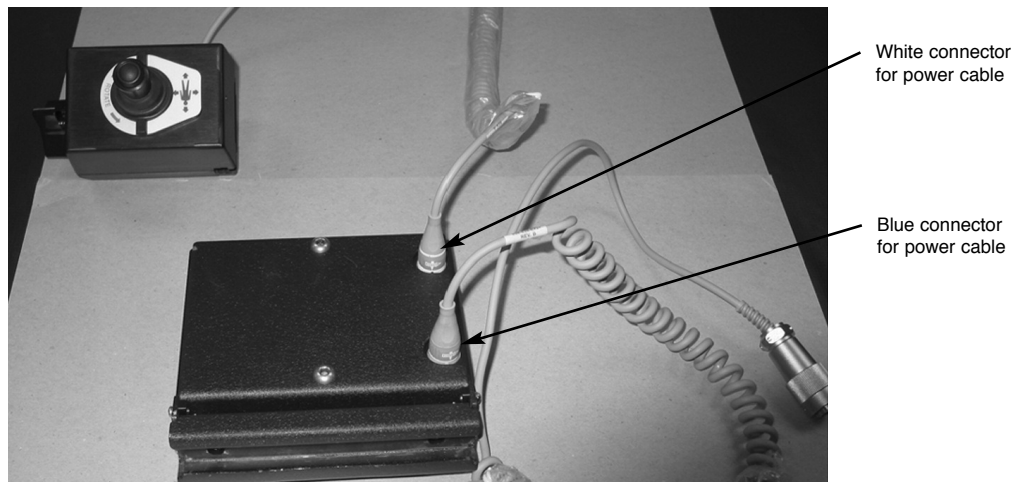


Figure 13.2.

14. CASTER REPLACEMENT

HEAD END CASTER REPLACEMENT

The two head casters lock simultaneously by depressing either the left or right pedal. They are connected via a hex shaft. (see Figure 14.1).

1. Lift head end of table so that casters are six inches off the floor.
2. Remove each pedal weldment (left and right), which are secured with two 9/64 allen head screw and slide hex shaft out.
3. Remove the two 1/2-inch hex bolts from each of the caster mount and slide casters out. (see Figure 14.1)

FOOT END CASTER REPLACEMENT

1. Lift head and foot end of table so that casters are six inches off the floor.
2. Each caster is secured with a 3/4-inch hex stud. To remove caster a special thin 3/4-inch wrench is required. When replacing caster use Loctite blue on threads.

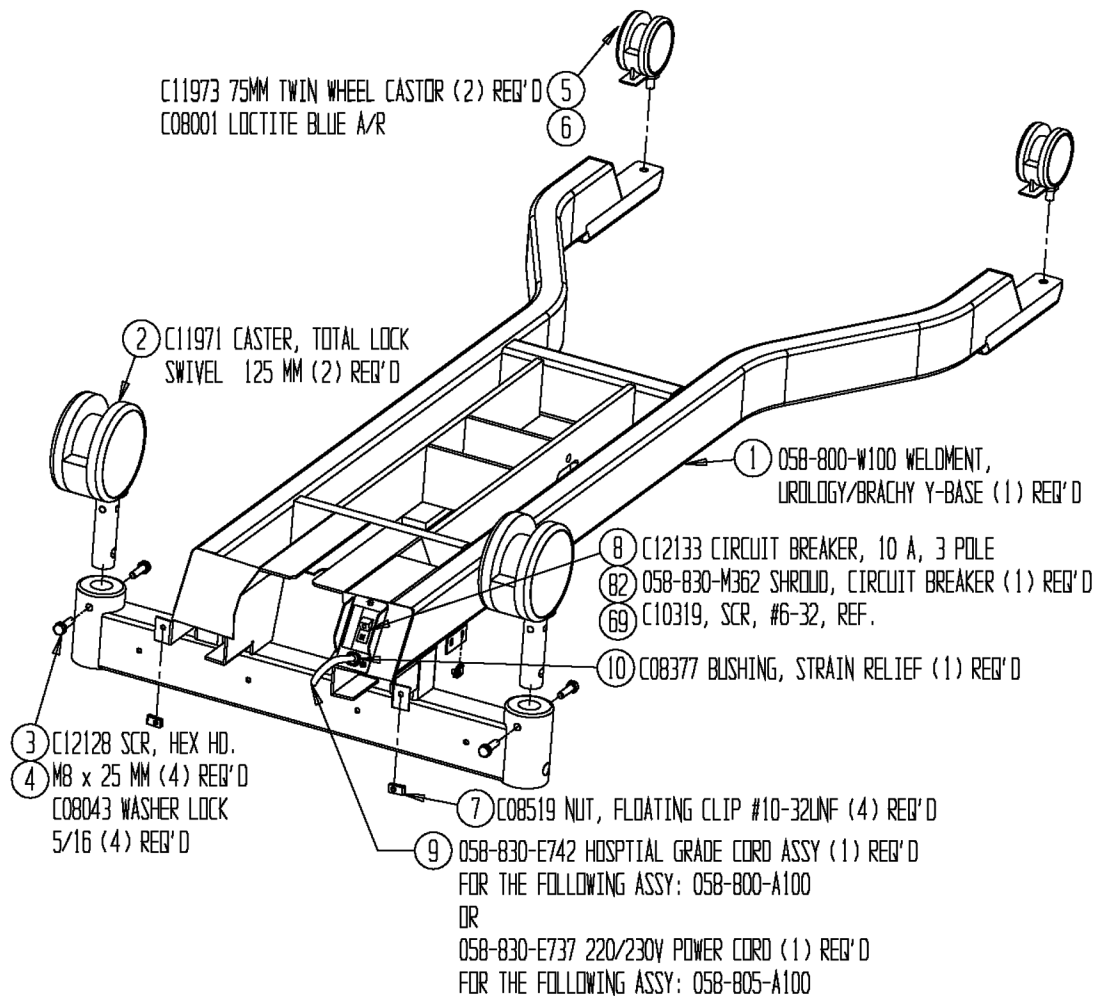


Figure 14.1 Caster Replacement

15. TABLE FIRMWARE UPDATE

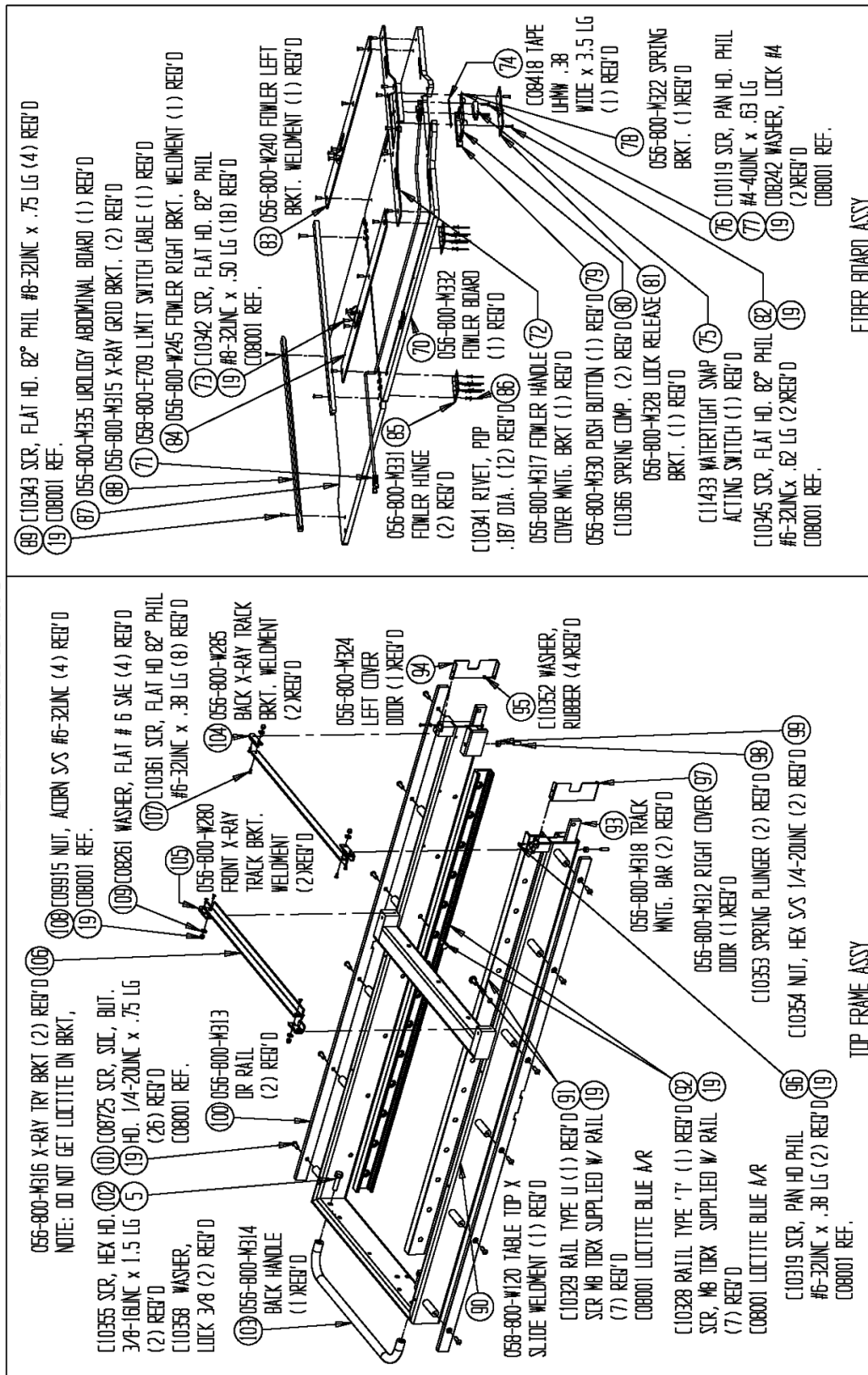
1. Connect the PC to the 9 pin female "D" connector of the control box, using the special 9 pin female to 9 pin male DSP programming cable.
2. Turn the computer and monitor on.
3. Turn the table on.
4. When Windows is finished booting, double-click the left mouse button on the Image table icon on the PC's desktop to start the utility software.
5. Enter the table serial number in the appropriate box in the utility software.
6. Click on the PROGRAM LCB to begin the firmware update.
7. When the update is complete, close any newly opened windows by clicking the X in the upper right corner of each window.
8. The Imaging Table Calibration Utility may be exited by clicking File --> Exit on the menu bar or by clicking the X in the upper right corner.

UROLOGY/ BRACHYTHERAPY ASSY
UROLOGYBRACHYTHERAPY058-800-A000-D



UROLGY/ BRACHYTHERAPY ASSY

UROLGYBRACHYTHERAPYASSY058-800-4000-D



Exploded view diagram of the X-Y Carriage Assembly. The diagram shows the main carriage body with various components labeled with callouts and part numbers. The components are arranged in an exploded view to show their relative positions and assembly sequence.

Callouts and Part Numbers:

- 9 C10367 RETAINING CLAMP .25 DIA. (2) REF'D
- 10 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 11 C12140 RETAINING CLAMP .38 DIA. (1) REF'D
- 12 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 13 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 14 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 15 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 16 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 17 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 18 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 19 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 20 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 21 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 22 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 23 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 24 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 25 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 26 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 27 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 28 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 29 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 30 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 31 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 32 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 33 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
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- 38 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
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- 40 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 41 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 42 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 43 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 44 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
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- 94 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
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- 97 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 98 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 99 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D
- 100 C09406 SCR, PAN HD. PHIL #6-32UNC x .50 LG (12) REF'D

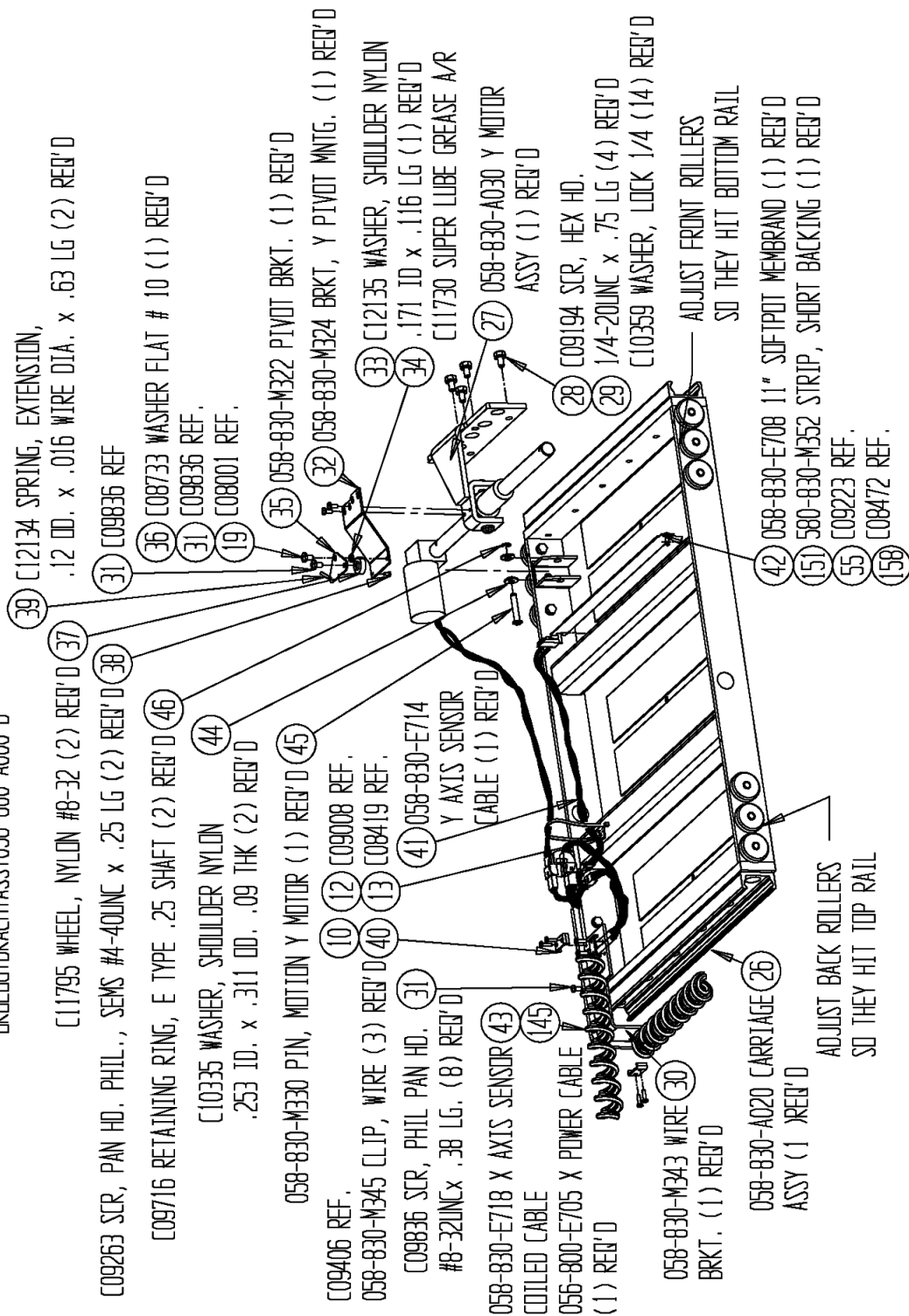
Assembly Notes:

- ADJUST WHEELS TO TOUCH TOP OF RAIL
- NOTE: PIVOT BOLTS LOCATED IN BOTTOM HOLES
- NOTE: GREASE TIP OF SCR. ONLY
- 3/8-16UNC HEX HEAD BOLTS AND LOCK WASHER SUPPLIED WITH VERTICAL EXTENSION ASSY
- 058-830-P453 COVER, RIGHT SIDE (1) REF'D
- 058-830-M346 COVER, BACK HARDWARE (1) REF'D
- 058-830-M348 BRKT., INNER CONNECTING (1) REF'D
- 058-830-P452 COVER, LEFT SIDE (1) REF'D
- 058-830-M348 BRKT., OUTER CONNECTING (2) REF'D
- 058-830-M349 BRKT., OUTER CONNECTING (2) REF'D
- 058-830-M364 BRKT., INNER FRONT CONNECTING (1) REF'D
- 058-830-M347 COVER, FRONT HARDWARE (1) REF'D
- 058-800-A100 I-BASE ASSY (1) REF'D
- 058-805-A100 I-BASE ASSY (220V) (1) REF'D

X-Y CARRIAGE ASSY

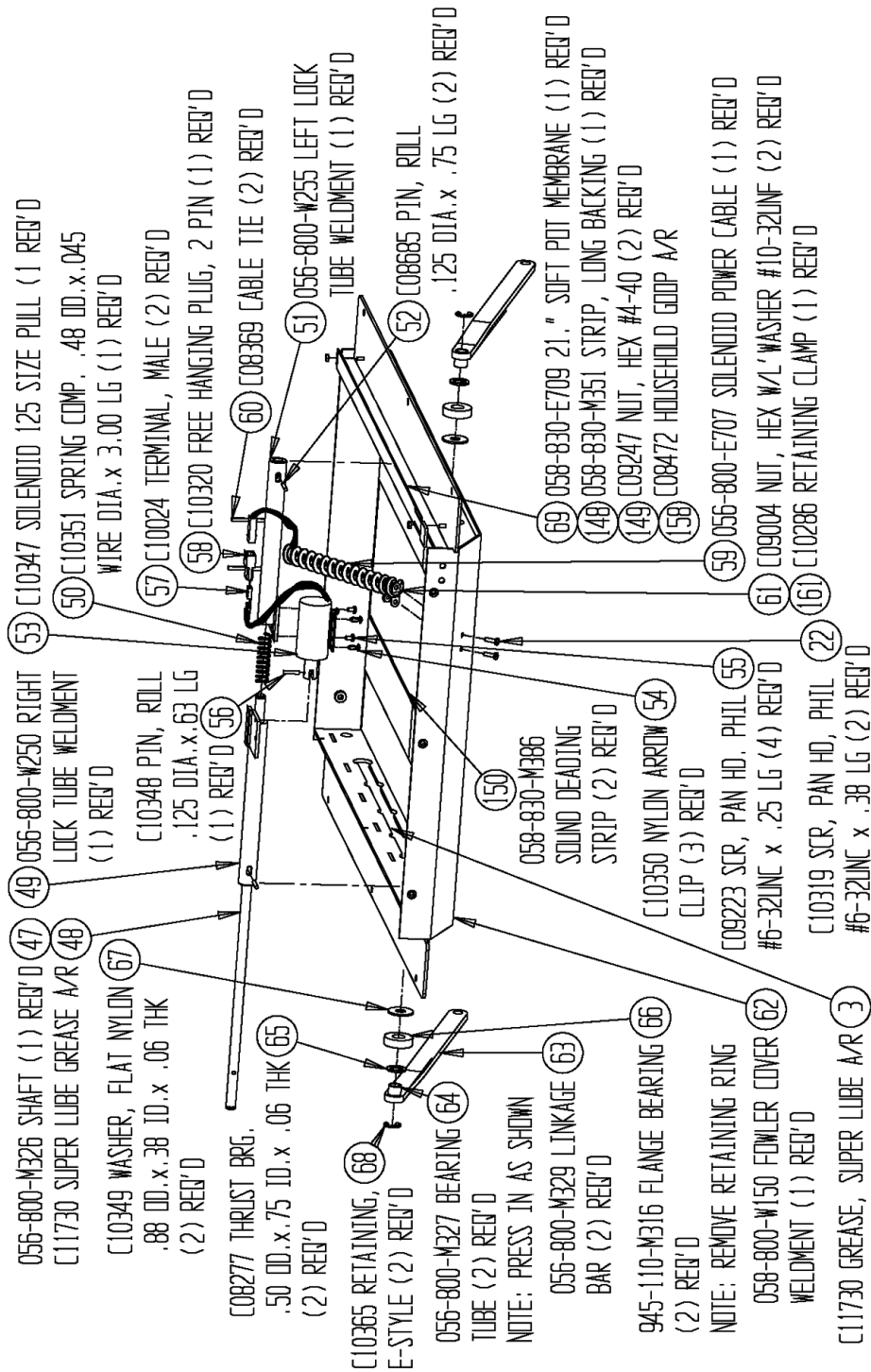
UROLOGY/ BRACHYTHERAPY ASSY

UROLOGYBRACHYASSY058-800-A000-D



UROLOGY/ BRACHYTHERAPY ASSY

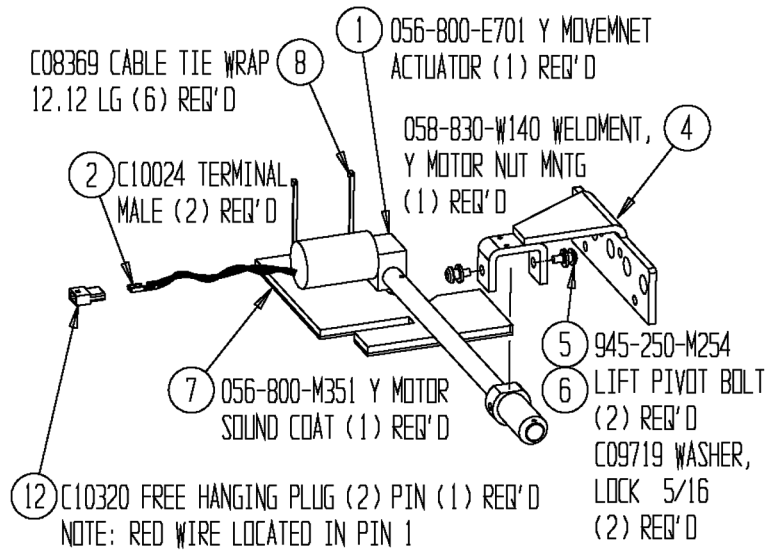
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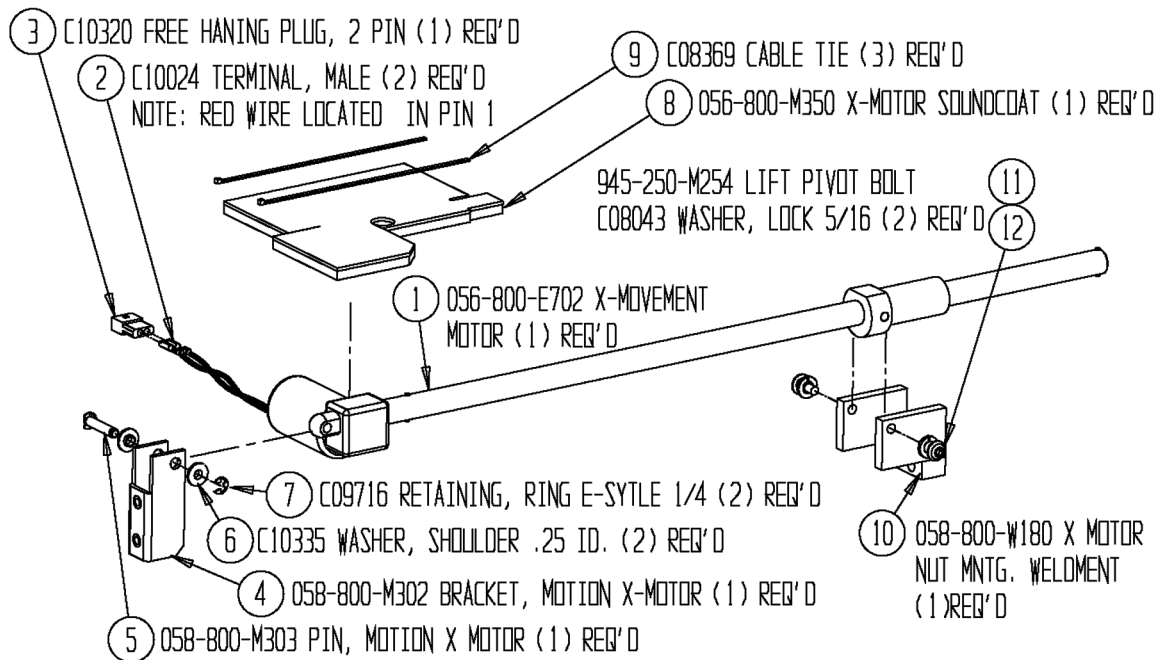
FOWLER COVER ASSY

X, Y MOTOR ASSY'S

XYMOTORASSY058-800-A040-B/058-830-A030-A



058-830-A030 Y MOTOR ASSY



058-800-A040 X MOTOR ASSY

LEG EXTENSION ASSEMBLIES

LEGEXTASSY: S058-800-A070-, 058-800-A080-

056-810-U504 LEG CUSHION (1) REQ'D
NOTE: REMOVE PROTECTIVE PAPER ON LOOP PORTION OF VELCRO AND APPLY CUSHION TO FRAME. CUSHION TO BE CENTERED

NOTE: ALIGN VELCRO ON CUSHION (056-810-U504) SO CUSHION IS ALIGNED WITH ALL EDGES OF FRAME. PLACE ENTIRE VELCRO ON MESH AS SHOWN. TYP. IN (2) PLC'S

C10450 RECT. TUBE CAP (2) REQ'D

C10338 NUT, ELASTIC JAM
1/4-20UNC TYP. IN (2) PLC'S

058-800-W225 LEG LEFT MNTG.
FRAME WELDMENT (1) REQ'D

C10340 SPRING, COMPRESSION
TYP. IN (2) PLC'S

058-800-W215 LEFT LOCK
BAR WELDMENT (1) REQ'D

C11156 SCREW, PAN HEAD PHILLIPS, SS
10-24 UNC x .50 LG. TYP. IN (6) PLC'S
C08001 LOCTITE BLUE A/R

C10360 #10 FLAT WASHER, SS TYP. IN (6) PLC'S
NOTE: INSTALL MNTG. WELDMENTS (058-800-W220, 058-800-W225) ON TABLE BEFORE MOUNTING SEAT FRAME WELDMENT (058-800-W210) TO LEGS.

058-800-W230 SEAT FRAME WELDMENT (1) REQ'D

C10339 SCR, SOC. BUTTON HD.
1/4-20UNC x 1.5 LG TYP. IN (2) PLC'S

C10337 WASHER, FLAT NYLON
.265 ID x .88 OD x .09 THK
TYP. IN (2) PLC'S

058-800-W220 LEG RIGHT MNTG.
FRAME WELDMENT (1) REQ'D

058-800-W210 RIGHT LOCK
BAR WELDMENT (1) REQ'D

NON-VIEWABLE LEG EXTENSION ASSY

056-451 RESTRAINING STRAPS 2/SET (1) REQ'D

C08725 SCR, SOC BUT HD.

1/4-20UNC x .75 LG (14) REQ'D
C08001 LOCTITE BLUE A/R

NOTE: INSTALL MNTG. WELDMENTS (058-800-W290, 058-800-W295) ON TABLE BEFORE MOUNTING LEG BOARD (058-800-M336) TO LEGS.

056-800-M307 OR RAIL (2) REQ'D

058-800-W295 LEG LEFT MNTG.
FRAME WELDMENT (1) REQ'D

058-800-W215 LEFT LOCK
BAR WELDMENT (1) REQ'D

058-800-W290 LEG RIGHT MNTG.
FRAME WELDMENT (1) REQ'D

058-800-W210 RIGHT LOCK
BAR WELDMENT (1) REQ'D

C10338 NUT, ELASTIC JAM
1/4-20UNC TYP. IN (2) PLC'S

056-800-U503 LEG CUSHION (1) REQ'D
NOTE: REMOVE PROTECTIVE PAPER ON LOOP PORTION OF VELCRO AND APPLY CUSHION TO FRAME. CUSHION TO BE CENTERED

056-864 ANKLE STRAPS (1) REQ'D

058-800-M336 LEG
BOARD (1) REQ'D

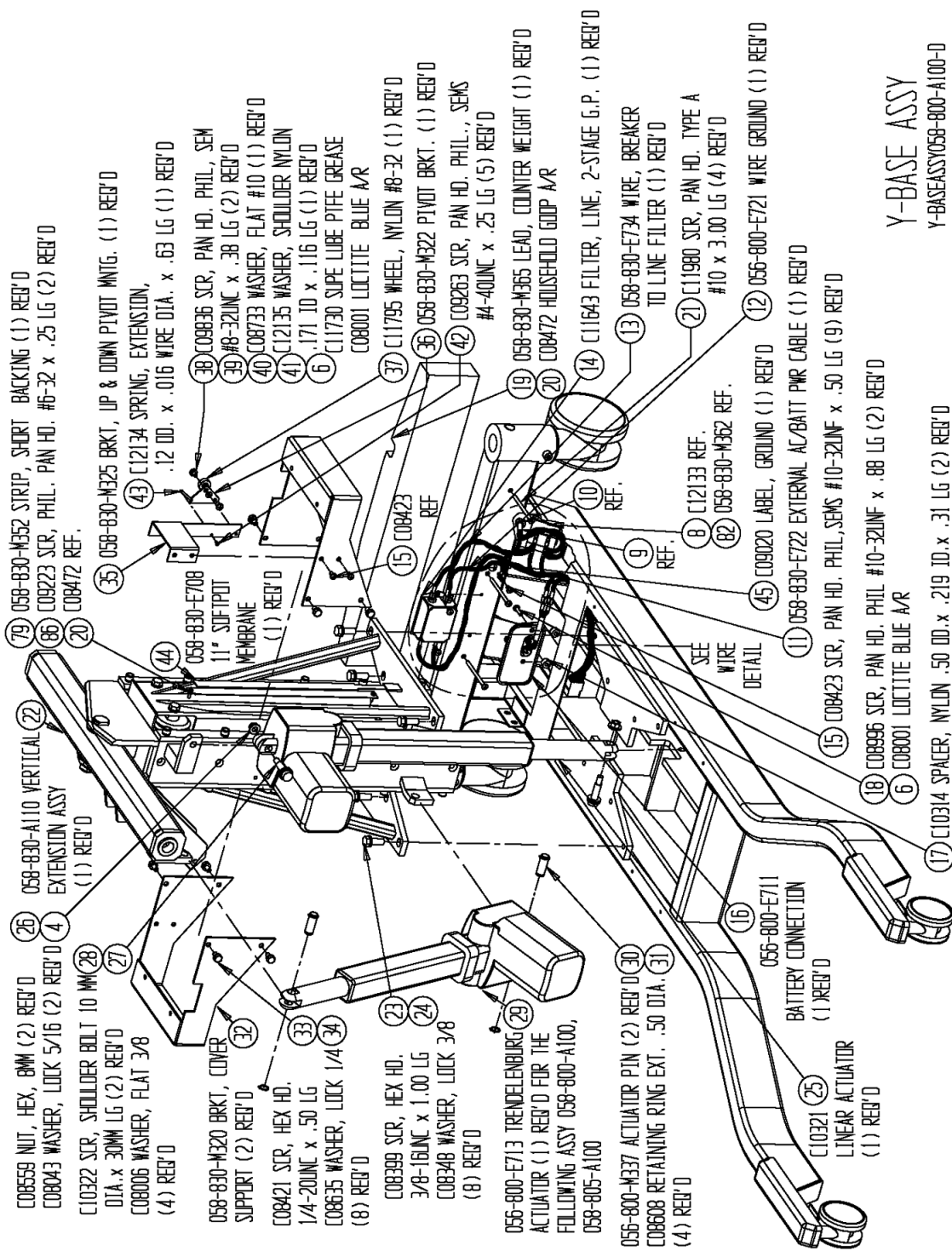
C10450 RECT. TUBE CAP (2) REQ'D

C10339 SCR, SOC. BUTTON HD.
1/4-20UNC x 1.5 LG TYP. IN
(2) PLC'S

C10340 SPRING, COMPRESSION
TYP. IN (2) PLC'S

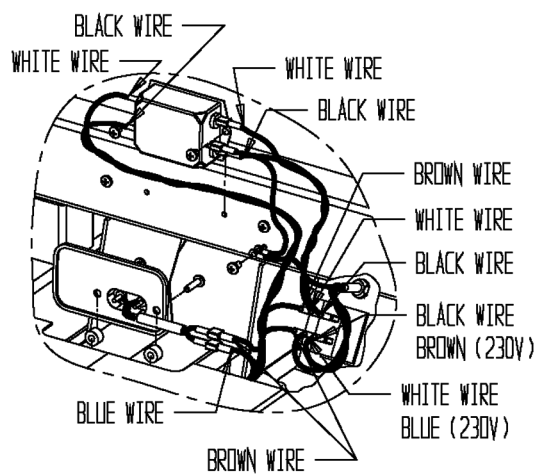
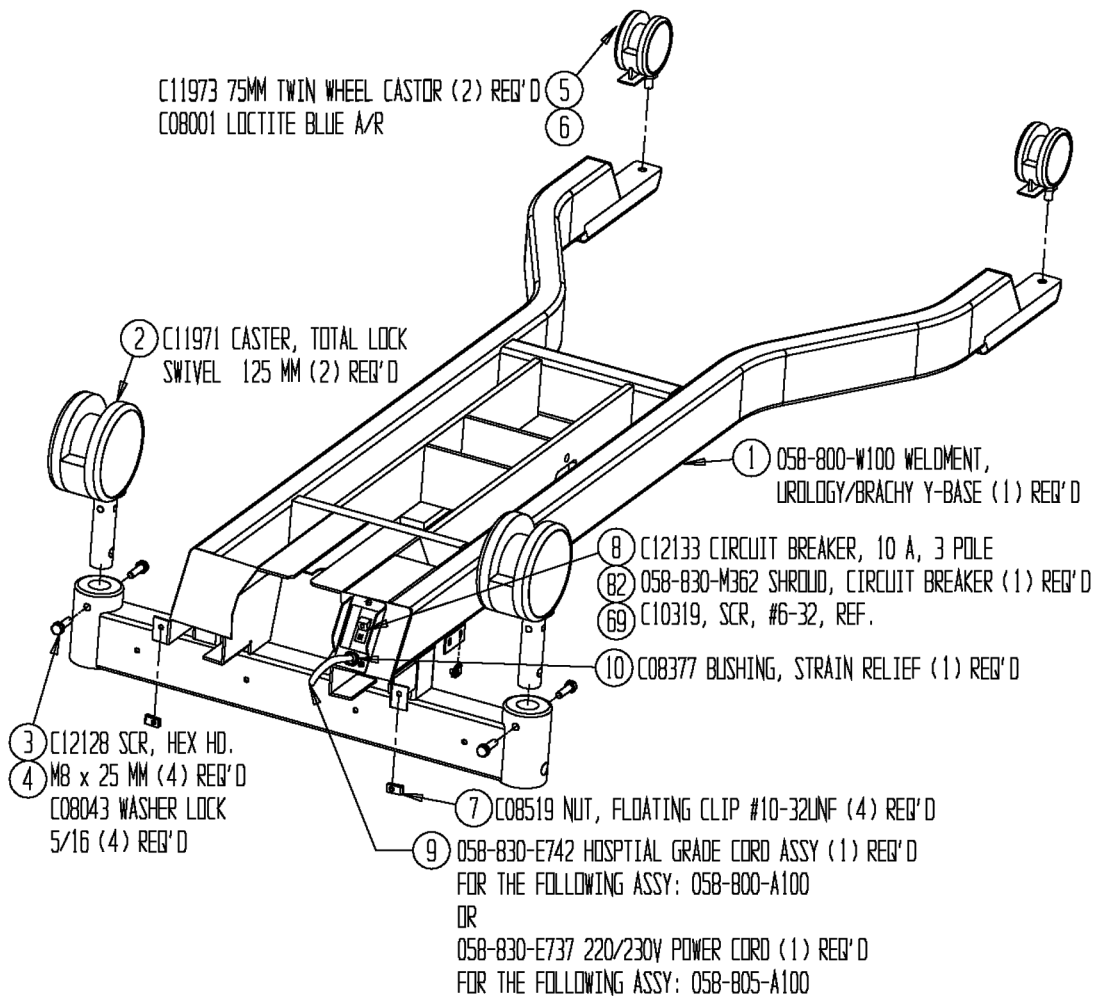
C10337 WASHER, FLAT NYLON
.265 ID x .88 OD x .09 THK
TYP. IN (2) PLC'S

VIEWABLE LEG EXTENSION ASSY



Y-BASE ASSY

Y-BASE ASSY 058-800-A100-D



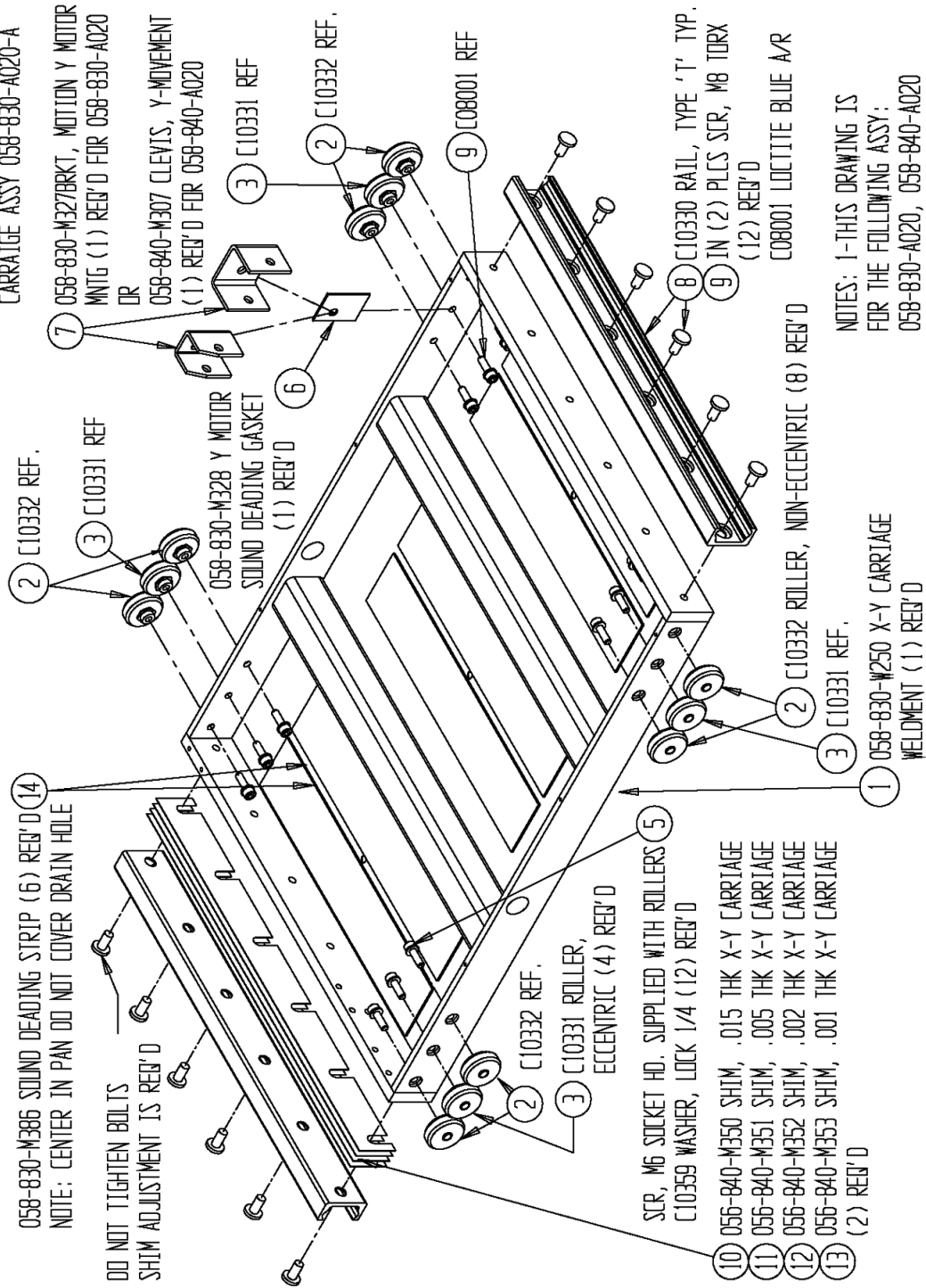
WIRE DETAIL

Y-BASE ASSY

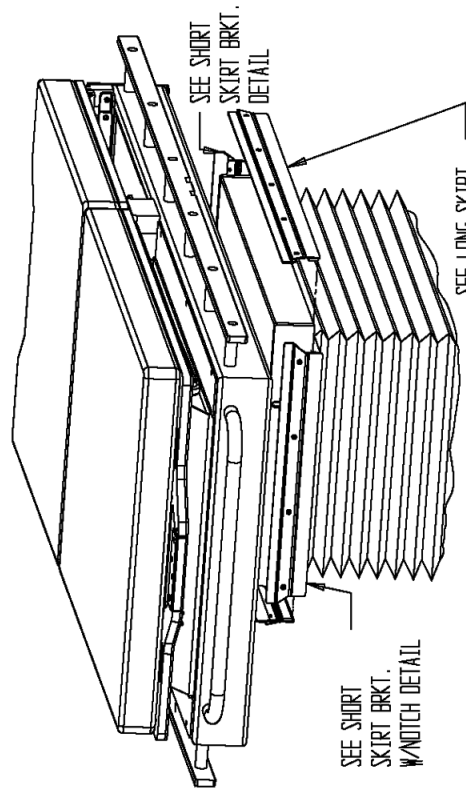
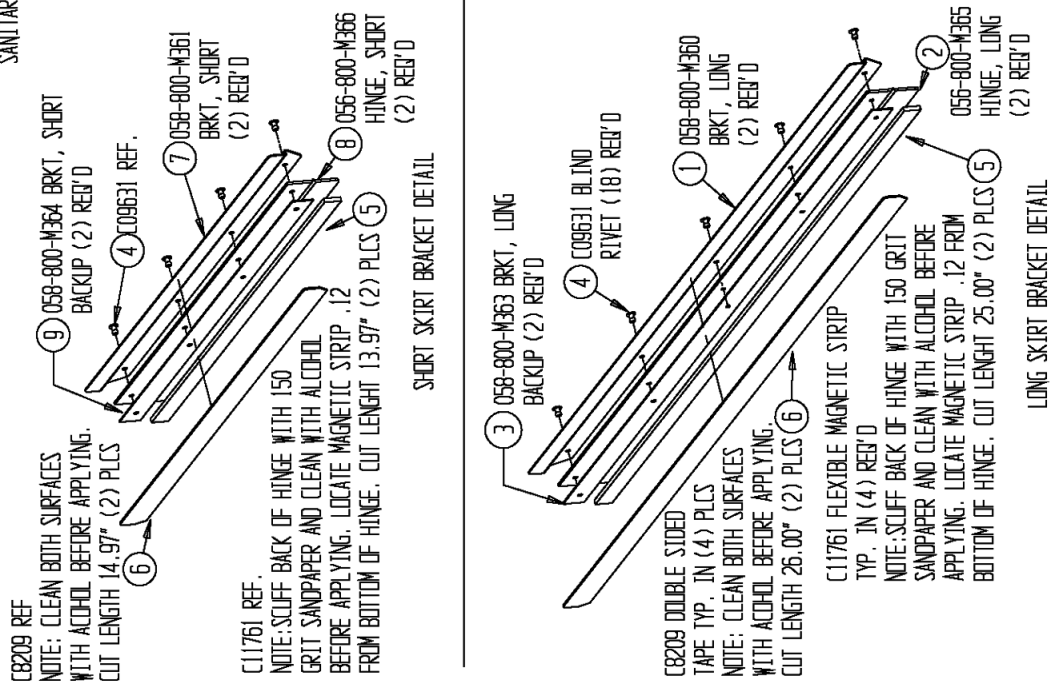
Y-BASEASSY058-800-A100-D

CARRIAGE ASSY

CARRIAGE ASSY 058-830-A020-A



SANITARY SKIRT ASSY SANITARYSKIRTA55058-830-A050-

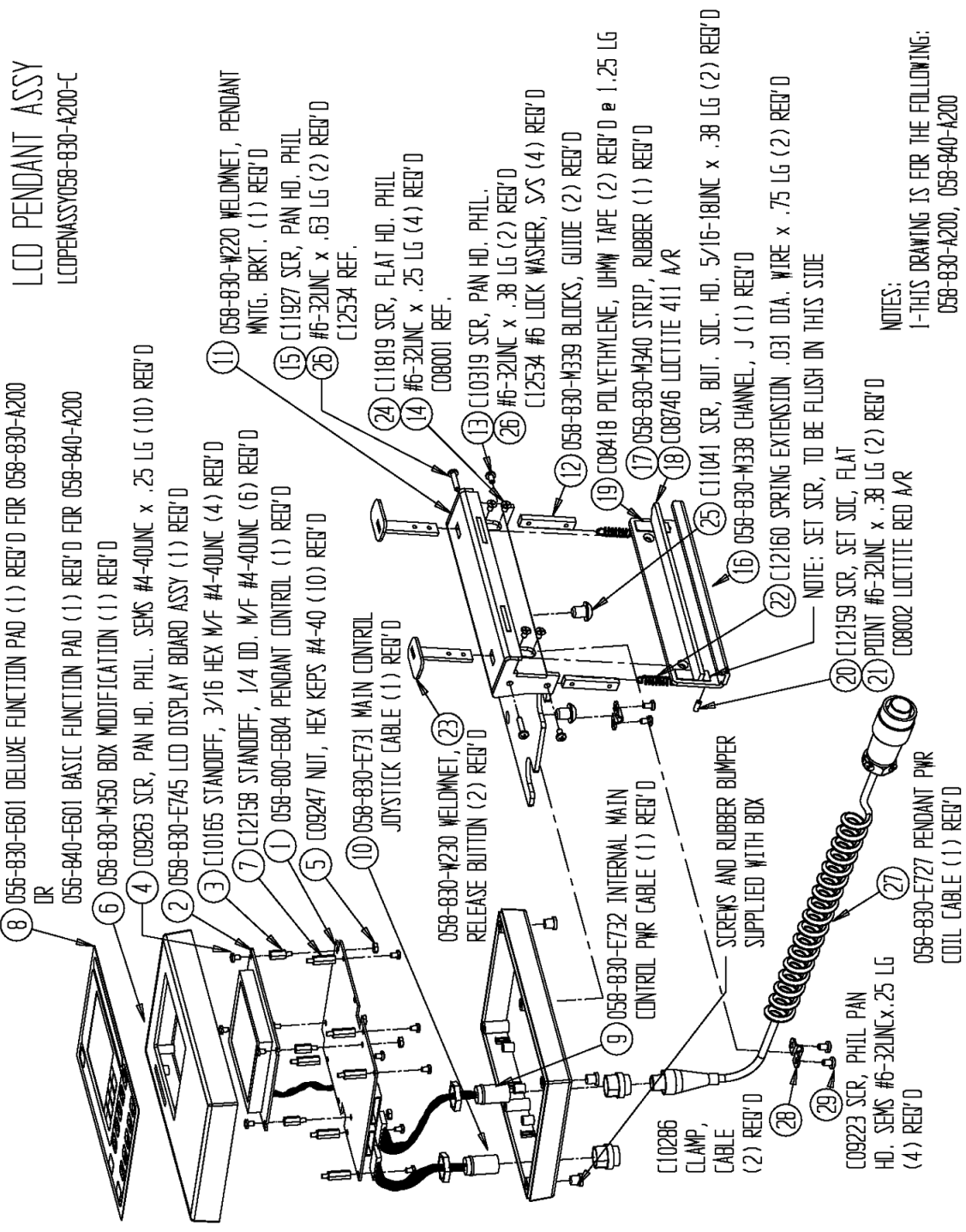


NOTE: CLEAN SURFACE WITH ALCOHOL PRIOR TO APPLYING. BRKT TO BE CENTER AND MAGNETIC TO BE EVEN WITH BOTTOM EDGE.

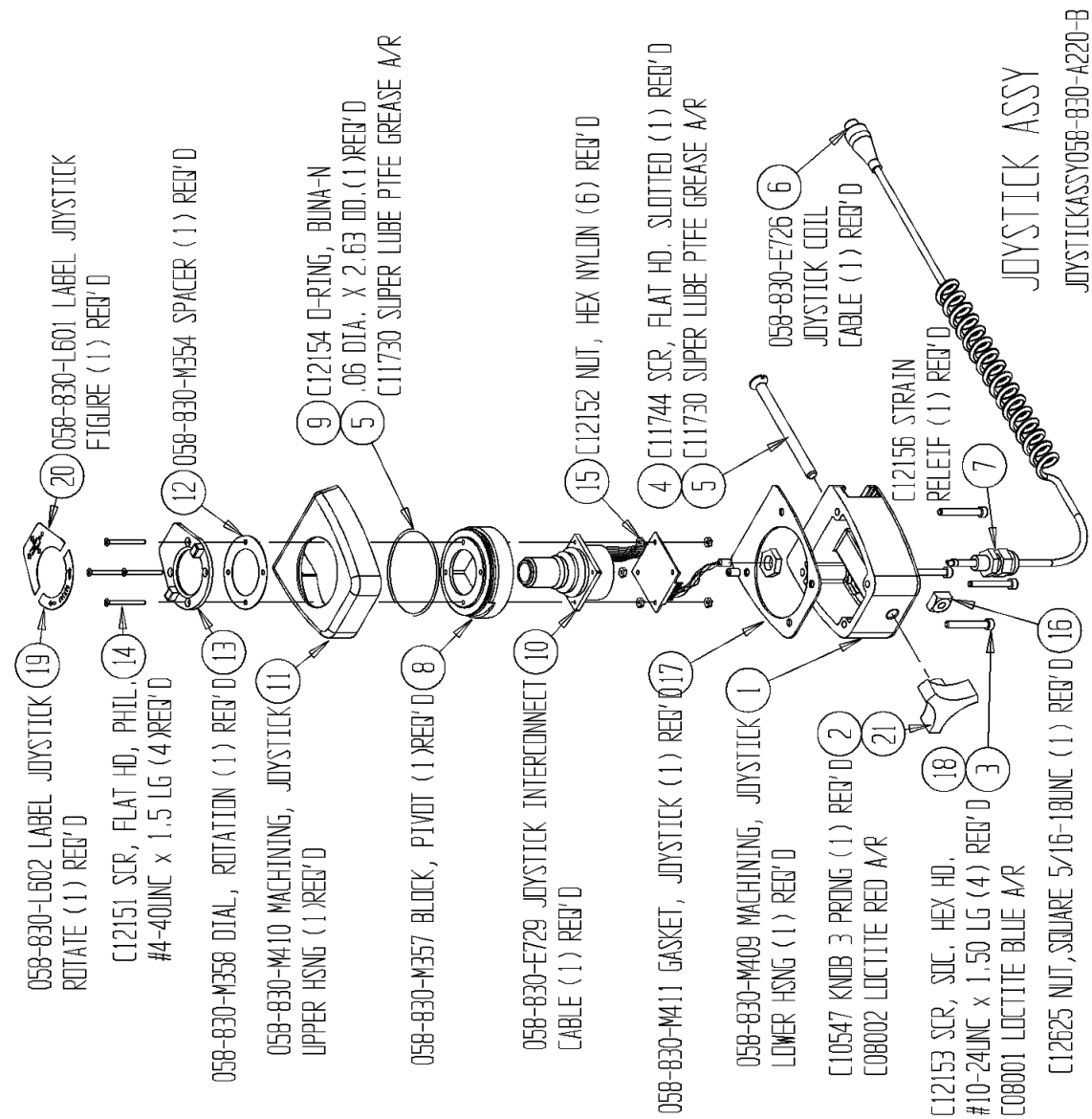
VERTICALEXTASSY058-830-A110-B

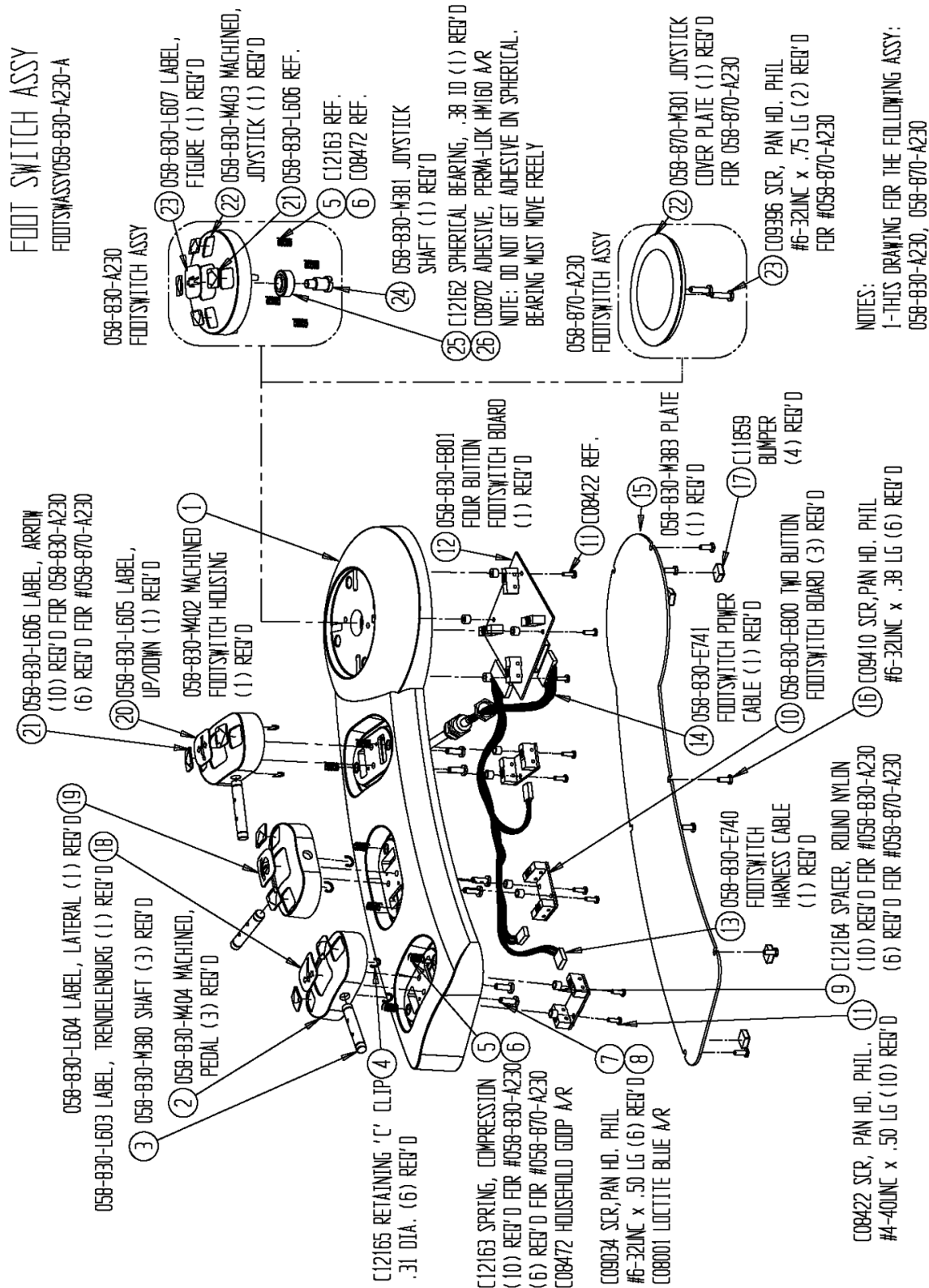


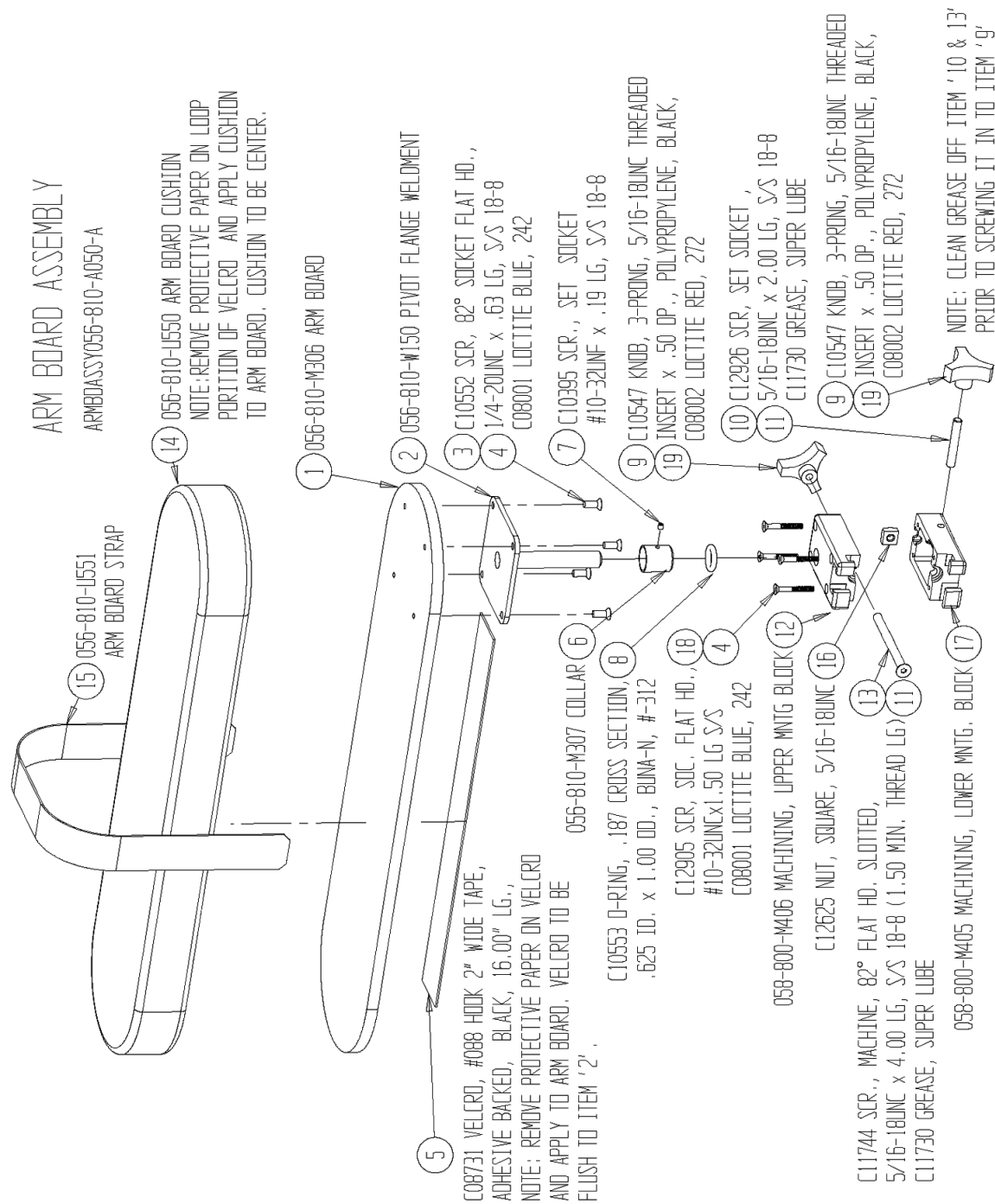




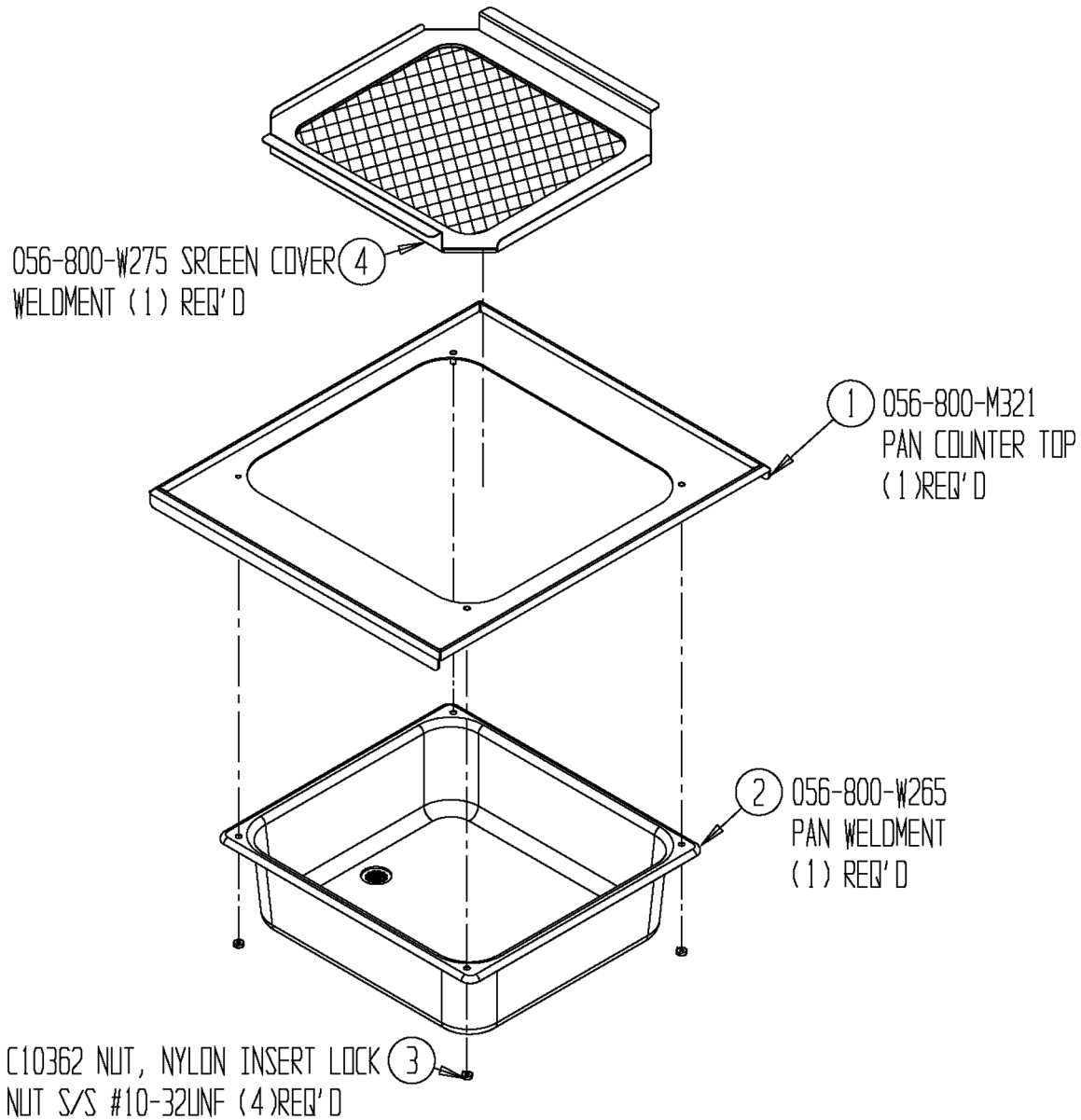
NOTES:
1-THIS DRAWING IS FOR THE FOLLOWING:
058-830-A200, 058-840-A200





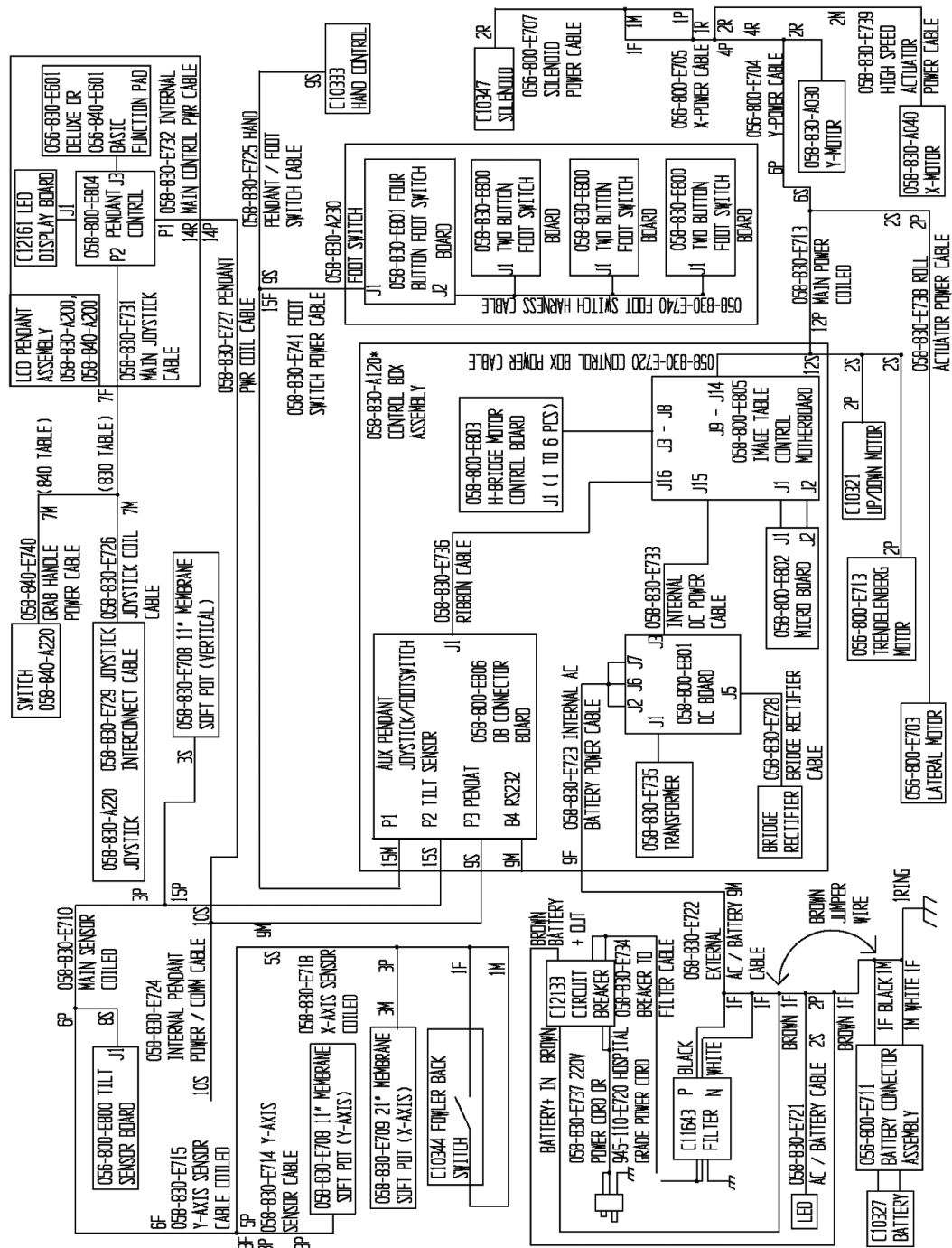


DRAIN PAN ASSY DRAINPANASSY058-800-A060-



NOTES: 1-ITEM'S NOT SHOWN ARE THE FOLLOWING ITEMS:
 ITEM '5' #056-460, HOSE DRAIN UROLOGY 6FT. (1)REQ'D
 ITEM '6' #056-424, ADAPTER REDUCING MALE 1/2x3/4, (1) REQ'D
 ITEM'S TO BE PLACE IN ASSEMBLE DRAIN PAN.

PART AND ASSEMBLY ILLUSTRATIONS



BIODEX

Biodex Medical Systems, Inc.

20 Ramsay Road, Shirley, New York, 11967-4704, Tel: 800-224-6339 (*In NY and Int'l, call 631-924-9000*), Fax: 631-924-9241, Email: sales@biodex.com, www.biodex.com